AMERICAN GAS ASSOCIATION MONTHLY

Vol. VIII No. 6

JUNE, 1926

IN THIS ISSUE

Ten McCarter Medals Awarded

Good Public Relations Sells Good Coke
By William A. Rich

How the Laboratory Tests Gas Ranges
By R. M. Conner

The Human Element in Window Displays
By R. M. Martin

The Record of the
Record Breaking Convention

Just Published!

The Proceedings of the Seventh Annual Convention of the American Gas Association are now available. All who attended the Convention will want copies as a matter of course. Those who did not attend will want the Proceedings for the information which is so valuable to every gas man.

This volume contains more than 1400 pages, profusely illustrated. In addition to committee reports, papers and addresses, the Proceedings contain complete lists of all general and sectional committees functioning throughout the year.

Price $3.00 to members;
$7.00 to non-members

Order Now!

AMERICAN GAS ASSOCIATION MONTHLY

342 MADISON AVENUE, NEW YORK, N. Y.

HOWARD F. WEEKS, *Editor*

Advisory Committee

FRANK LE ROY BLANCHARD
HARLOW C. CLARK
E. FRANK GARDINER
ARTHUR W. HAWKS, Jr.
JAMES M. BENNETT
CHARLES W. PERSON
HENRY OBERMEYER

VOLUME VIII | JUNE, 1926 | NUMBER 6

CONTENTS

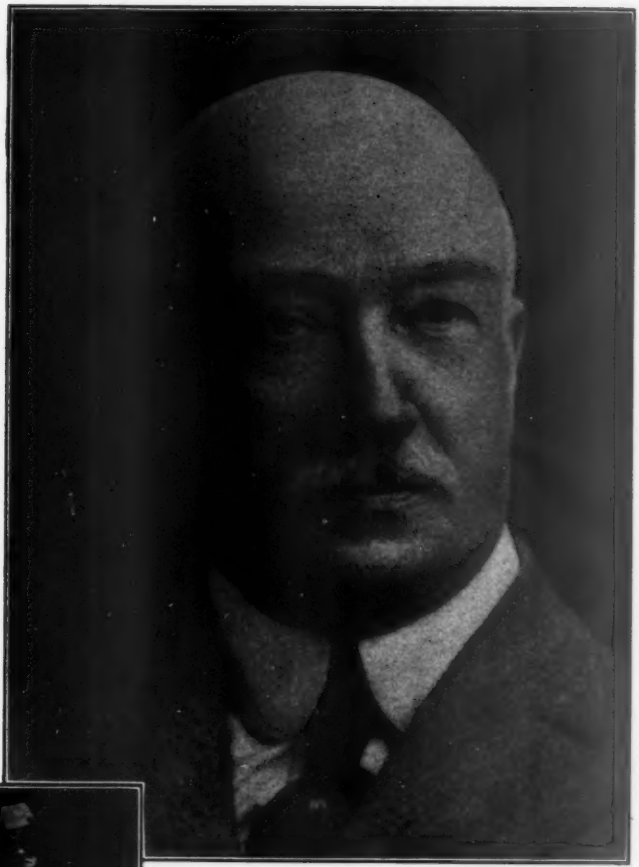
	Page
GAS RANGES APPROVED IN LABORATORY	323
PERMISSIBLE FLUE AREAS FOR GAS PRACTICE	325
THE HUMAN ELEMENT IN WINDOW DISPLAY — R. M. Martin	341
DOES HOME SERVICE APPEAL TO YOUNG PEOPLE? — Kathleen Atkinson	329
WHAT THE CERAMIC INDUSTRY OFFERS — Horace H. Clark	331
ACADEMY OF MUSIC CLOSED FOREVER	335
GOOD PUBLIC RELATIONS SELLS GOOD COKE — William A. Rich	337
HOW THE LABORATORY TESTS GAS RANGES — R. M. Conner	345
THE MODERN METHOD OF COLLECTING DRIPS — F. A. Baker	347
THE SMALL GAS PLANT AND THE LARGE ONE — J. A. Brown	349
TEN McCARTER MEDALS AWARDED	351
DISTRIBUTION CONFERENCE HELD IN CLEVELAND	355
A REVERIE THAT COVERS FIFTY YEARS — George S. Carlyle	359
THE TREND OF ACCIDENT PREVENTION — M. I. Mix	367
THE DISTRICT SERVICE REPRESENTATIVE PLAN — H. M. Pace	369
THE ADVERTISING VALUE OF A NEW BUILDING	371
ANNUAL "STYLE SHOW" TO BE "BIGGER AND BETTER"	373
A NATIONAL ANALYSIS OF "COOKING IN VOLUME"	377
A SIMPLE, FLEXIBLE AND PRACTICAL SALES PROGRAM	379

SUBSCRIPTION RATE — *$3.00 PER YEAR*

For statements and opinions contained in papers and discussions appearing herein, the Association does not hold itself responsible.

Entered as Second Class Mail Matter at the Post Office at Brattleboro, Vermont, Februray 10th, 1922, under the Act of March 3, 1879.

Our Own Who's Who



XIII

John Gribbel

JOHN GRIBBEL, manufacturer, banker; born Hudson City, N. J., March 29, 1858. Educated in College of City of N. Y. Began business career with Importers' and Traders' National Bank, New York City, 1876-1877; with Leather Manufacturers' National Bank, N. Y. City, 1877-1883; N. Y. agent for Harris, Griffin & Co., manufacturers of gas meters, 1883-1890; admitted to partnership in same business, 1890, in firm of John J. Griffin & Company, which title continues, though he has been sole proprietor since 1892. Mr. Gribbel is a director, Curtis Publishing Company; president, Tampa Gas Company, Tampa, Florida; director, Real Estate Trust Company, Philadelphia-Girard National Bank, Kings County Lighting Company, N. Y., Victory Insurance Company, Reliance Insurance Company, Alliance Insurance Company, Laguna Corporation, N. Y., United Gas & Electric Corporation, N. Y., Fire Association, Phila. President, Royal Electrotype Company, Philadelphia; director, Canadian Meter Company, Hamilton, Ontario; trustee, Wesleyan University, Middletown, Connecticut; member American Gas Association, Association of Illuminating Engineers.

AMERICAN GAS ASSOCIATION MONTHLY

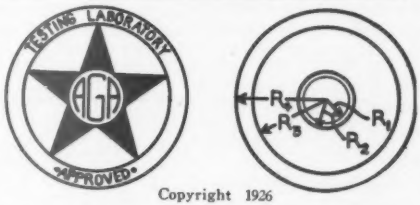
Vol. VIII JUNE, 1926 No. 6

Gas Ranges Approved in Laboratory

Initial List of Models Complying to American Gas Association Specifications Is Issued

TWENTY-TWO models of gas ranges, having been submitted by their manufacturers to the Gas Appliance Testing Laboratory in Cleveland, Ohio, for testing, have been officially approved, as they comply with American Gas Association safety requirements. These models are now entitled to bear the official seal of the A.G.A.

This initial list is the result of testing only one model from each manufacturer or division, selected by the maker for the first cycle of tests, in which all manufacturers were invited to participate. Other models by the same manufacturers, submitted for the second cycle, together with products of other manufacturers, are now being tested, and additional lists will be issued until the approvals are complete.



Copyright 1926

IN the Laboratory approval seal, the star is five-pointed and is to be printed in light blue. The inner circle R-1 marks the outline of the monogram forming the outside of the letters A. G. A. R-2 is the circle inscribed in the blue star. R-3 marks the outer edge of the star points, and R-4 is the outside circle. The proportion of the circle is as follows:

R-1 : R-2 : R-3 : R-4 = 5 : 6 : 16 : : 20

The lettering "Testing Laboratory" and "approved" is too crowded as it appears on the cut; it should cover a wider area. The size of the lettering is half the radius R-2.

The minimum size of the Laboratory Approval seal for use on gas ranges shall be 1½ inches, overall dimension. Seals of other sizes would be in the proportions indicated above.

The Association has acknowledged with appreciation the hearty co-operation of the manufacturers in this undertaking. Into this has been built in addition to the organization and equipment, the hopes and determination of the gas industry of America for better service and safety to the public. The Association has further acknowledged with gratitude the assistance and hearty co-operation of the United States Bureau of Standards, the Bureau of Mines, the Public Health Service and the National Association of Master Plumbers.

In response to a suggestion from the Executive Board, the Association has received from many gas companies assurances of support to limit the sale of gas ranges to those approved by the

Laboratory. Some companies will for the present, in pursuance of their policy, recognize also all models made by manufacturers who appear on the following list, until such time as the testing of all models submitted has been completed. However, only those models actually approved may bear the official seal.

With the Laboratory approval the range manufacturer can display on his range a distinctive seal of approval. This approval mark will make it possible for range manufacturers, as well as local gas companies, to advertise in a very simple way ranges of merit. Unquestionably, after a short period of such advertising, the public will look for this mark of approval, and it will become the basis for purchasing.

In order to accomplish this, the Board has asked gas companies to request manufacturers who are entitled to the approval seal to use it. Both manufacturers and gas companies should be encouraged to use the seal as the basis for their advertising.

The approval seal will be a circle in which appear the words, "Testing Laboratory Approved", the center being a blue five-pointed star on a white field, containing the initials "A.G.A."

WHOLESALE BUSINESS NEEDED

SAMUEL INSULL, President, The Peoples Gas Light and Coke Company, in addressing the fifth annual conference of Employees' Representation, said:

"Gas has almost ceased to be an illuminant. I do not believe it is even so used in this room. It was almost thought sacreligious, when I came over here, to suggest that it would be a little cooler here if we had electric light instead of gas lights. I suggested the change, though for an entirely different reason. I wanted to bring home to the gentlemen associated with me in the management here that if they wanted to preserve a permanent business, they had better get away from trying to maintain gas arc lamps,—and they have got well away from it by this time.

"As I say, it is a business in which many changes are taking place. We have got to shift from depending on the retail business, for disposition of the greater portion of our output, to a wholesale business. We have got to find something to take the place, in our business, of the large wholesale customers that the Commonwealth Edison Company has."

Service Letters Wanted

THE Library of Congress is anxious to secure copies of A. G. A. Service Letters, Nos. 1 to 20, and 55. Those who desire to present copies of these letters should send them to the editor who will see that they are forwarded to the proper authorities.

INITIAL LIST OF APPROVED GAS RANGES

May 3, 1926

Model No.	*Trade Name*	*Manufacturer*
505L	A-B	A-B Stove Company
601-R	York	Abendroth Brothers
16-41	Fortune	Abram Cox Stove Company
2472 SF	Dangler	American Stove Co., Dangler Div.
G-462	Clark Jewel	American Stove Co., Geo. M. Clark Div.
116-42	New Process	American Stove Co., New Process Div.
9-606	Quick Meal	American Stove Co., Quick Meal Div.
602-L	Detroit Jewel	Detroit Stove Works
1016 L Serial No. 1	White Star	Detroit Vapor Stove Company
660-9 L	Eriez	Eriez Stove & Mfgr. Company
2661 TR	Estate	Estate Stove Company
M 418-RT	Glenwood	Glenwood Range Company
158-8-3 V	Garland	Michigan Stove Company
1837-S	Quality	Roberts & Mander Stove Company
164 C.G.R.	Quick Service	Somerville Stove Works
461-LS Serial No. 5291	Acorn	Standard Gas Equipment Corp., Acorn Div.
830	Oriole	Standard Gas Equipment Corp., Oriole Div.
20-16-R	Triplex	Standard Gas Equipment Corp., Triplex Div.
OD 450 SE	Vulcan Smoothtop	Standard Gas Equipment Corp., Vulcan Div.
W 618 RT	Tappan	Tappan Stove Co., The
1184	Tinnerman	Tinnerman Stove & Range Company
418 R	Wincroft	Wincroft Stove Works

Permissible Flue Areas for Gas Practice

A Discussion of an Unique Method That Is Employed By a Far-Western Company

PREPARED BY

Portland — UTILIZATION LABORATORY, PORTLAND GAS & COKE CO. — Oregon

TO be satisfactory a gas appliance must operate with perfect combustion even though no vent or flue be attached to provide draft. Then if a vent is installed on such an appliance, it need only be expected to exert sufficient draft suction under operating conditions to counterbalance its own friction to the flow of exhaust products passing through it with a velocity just adequate for the immediate removal of their own volume. It is recommended, however, that the draft exceed that absolutely necessary by a slight value, say at least .005 inches of water on very small vents and preferably more on larger sizes. This gives the appliance a small advantage and tends to offset atmospheric idiosyncrasies together with changes from expected stack temperatures and partial vent corrosion stoppages.

In gas utilization work it is common practice to test draft in the vent immediately after it leaves the appliance and before any dampers are passed. It may be said that any showing of draft suction at this point proves that the vent is adequate to eliminate all exhaust products which it receives for the particular condition involved at any instant. It does *not* show that the construction of the appliance is proper or that it is eliminating through its vent all products of combustion. This latter condition can only be determined by examination and study of the appliance itself.

NOTE BY R. M. CONNER

ONE of the most original methods ever proposed for determining the proper size of flue pipes for gas appliances has been worked out by the Utilization Laboratory of the Portland Gas and Coke Company, as described in the accompanying article. Their work represents probably the most novel method of attacking this problem that has been evolved.

Venting problems for many years have been of unusual interest to gas engineers in general. Some companies vent all their appliances, and owing to the many different opinions existing throughout the industry on this subject, it is very essential that some authoritative data of this kind be presented.

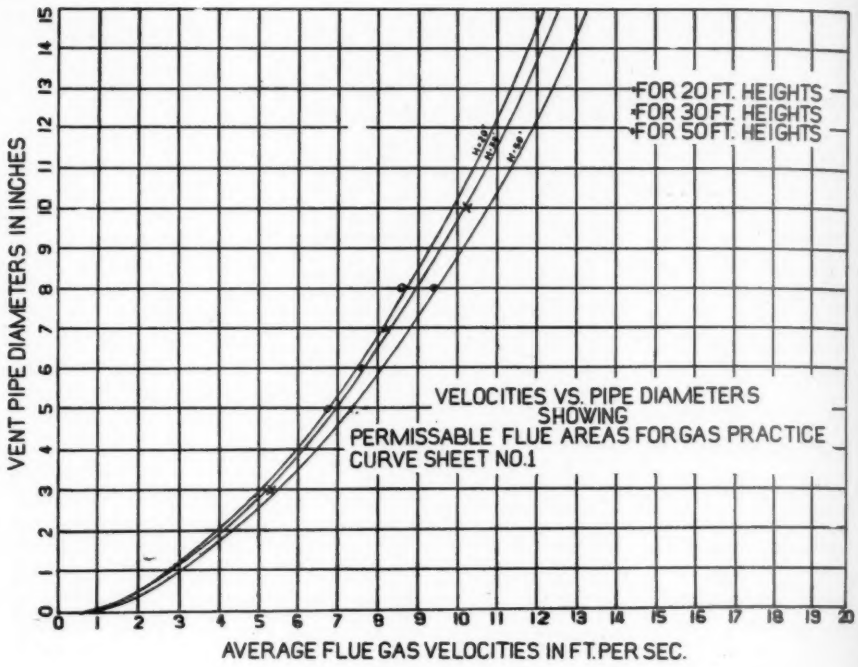
The methods proposed in this article have been adopted by the Pacific Coast Gas Association, and checked for their accuracy by engineers of the American Gas Association.

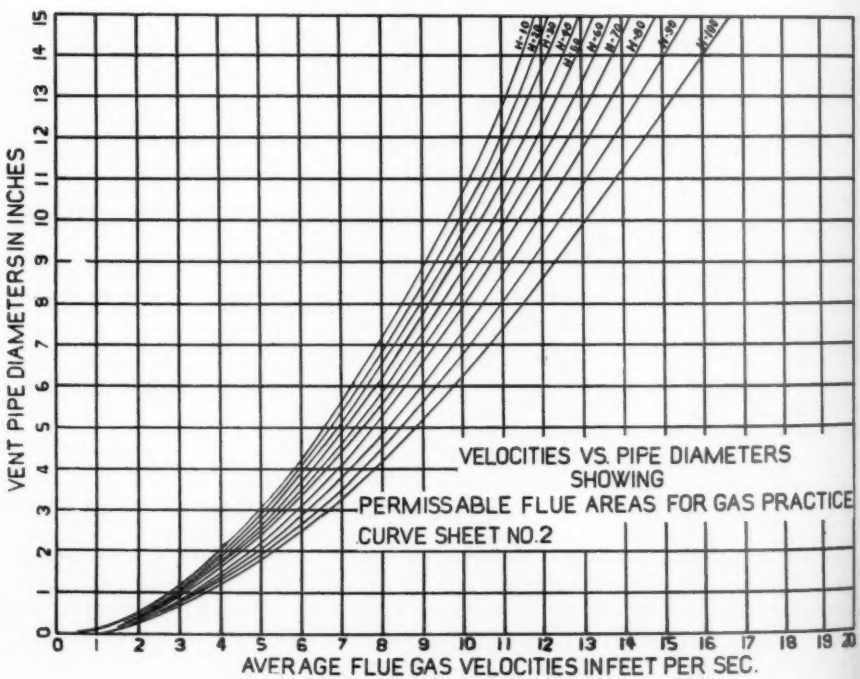
The average velocities given in Table 1, for flue gas passing through round vent pipes have been found from data collected on installations classed as average to poor, where the vent was just able to pass the products of combustion and maintain a slight suction at the appliance. These conditions, when shown graphically, appear as shown on curve sheet No. 1.

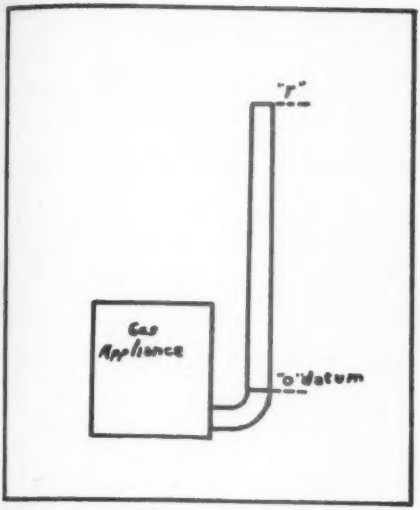
TABLE 1: FLUE GAS VELOCITIES IN FEET PER SECOND

Vent Dia. In Inches	Stack Height H = 20′	H = 30′	H = 50′
3	5.10	5.30	
4		6.10	
5	6.70		7.40
6	7.60		
7		8.20	
8	8.60		9.40
9			
10		10.20	

Bernoulli's theorem can be applied to the steady and continuous flow of gases in long pipes when there are small pressure drops. According to this method of analysis the total head is the same at all points in the passage.


FOR 20 FT. HEIGHTS
FOR 30 FT. HEIGHTS
FOR 50 FT. HEIGHTS
VELOCITIES VS. PIPE DIAMETERS
SHOWING
PERMISSABLE FLUE AREAS FOR GAS PRACTICE
CURVE SHEET NO.1
VENT PIPE DIAMETERS IN INCHES
AVERAGE FLUE GAS VELOCITIES IN FT. PER SEC.


VELOCITIES VS. PIPE DIAMETERS
SHOWING
PERMISSABLE FLUE AREAS FOR GAS PRACTICE
CURVE SHEET NO.2
VENT PIPE DIAMETERS IN INCHES
AVERAGE FLUE GAS VELOCITIES IN FEET PER SEC.



At the datum point "o" it is the sum of the velocity head $\left(\frac{V^2}{2g}\right)_o$ the pressure head $\left(\frac{P}{\delta}\right)_o$ and the potential head Z_o; and at the subsequent point (r) just before the gas is exhausted from the flue it is the sum of the similar heads for that point together with the friction head (F) of the intervening passage. Thus

$$\left(\frac{V^2}{2g}+\frac{P}{\delta}+Z\right)_o = \left(\frac{V^2}{2g}+\frac{P}{\delta}+Z\right)_r + F$$

EQUATION I

in which

V = velocity of flow in feet per second.
P = pressure in pounds per square foot.
δ = specific density or weight per cubic foot of flue gas.
Z = elevation above datum in feet.

The friction head is

$$F = f\ \frac{V^2}{2g}\ .\ L\ .\ \frac{1}{\left(\frac{A}{S}\right)^y}$$

EQUATION II

in which

f = coefficient of friction.
L = equivalent length of vent in feet.
A = area of passage in square feet.
S = length of perimeter of cross section in feet.

Let

δ_m = mean density.
P_o = actual draft desired at appliance outlet.
P_r = flue gas pressure at "r" which we may say is atmospheric.
H = height in feet of flue considered.

Then from Equation I

$$+\frac{P_o}{\delta_o}+\frac{V_o^2}{2g}+H = \frac{P_r}{\delta_r}+\frac{V_r^2}{2g}+O+f\frac{V^2}{2g}L\frac{I}{\left(\frac{A}{S}\right)^y}$$

and since velocity head is assumed constant

$$+\frac{P_o}{\delta_o} = +\frac{P_r}{\delta_r} - H + f\frac{V^2}{2g}L\frac{I}{\left(\frac{A}{S}\right)^y}$$

$$f\frac{V^2}{2g}L\frac{I}{\left(\frac{A}{S}\right)^y} = \frac{P_o}{\delta_o}-\frac{P_r}{\delta_r}+H, \text{ where}$$

$$\frac{P_o}{\delta_o}-\frac{P_r}{\delta_r} = \frac{\Delta P}{\delta_m} \text{ a minus quantity}$$

or, $$f\frac{V^2}{2g}L\frac{I}{\left(\frac{A}{S}\right)^y} = H - \frac{\Delta P}{\delta_m}$$

EQUATION III

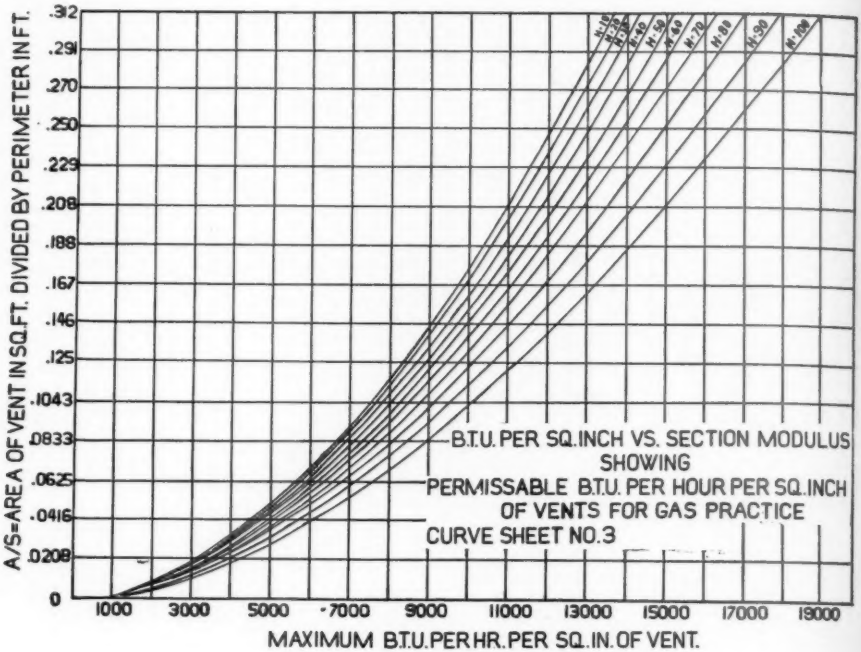
This equation must represent the theoretical basis for the curves shown on sheet No. 1.

Therefore, we may take the average to poor installation as a basis for horizontal runs, elbows, etc., and then determine the constants which co-ordinate the practical curves on sheet No. 1 with the theoretical equation.

Good practice directs that 12 diameters of vent length be allowed for each 90° elbow, but since elbows and horizontal run invariably decrease as H increases, we may make a definite allowance for horizontal run and elbows which depend upon the height of vent to be provided.

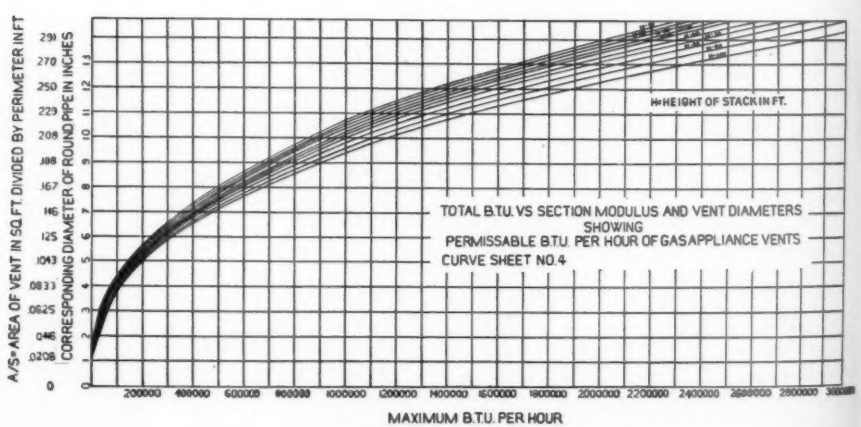
On short vents where draft conditions are inferior due to reasonably low temperatures in the appliance exhaust, the mean stack temperature and the resultant density may be determined by inserting a thermometer one-third the distance from the appliance to the end of the vent.

To cover average to poor draft condi-



tions we may assume this temperature to be 140° F. with 100 per cent of excess air for say a 20-foot value of H. As H increases, higher temperatures are usually encountered, and if so, the draft at the base is found to be correspondingly higher. Therefore, Table II has been prepared from actual practice to show Average Safe Values for L and H — $\frac{\Delta P}{\delta_m}$.

(Continued on page 376)


A/S=AREA OF VENT IN SQ.FT. DIVIDED BY PERIMETER IN FT
CORRESPONDING DIAMETER OF ROUND PIPE IN INCHES
H=HEIGHT OF STACK IN FT.
TOTAL B.T.U. VS SECTION MODULUS AND VENT DIAMETERS
SHOWING
PERMISSABLE B.T.U. PER HOUR OF GAS APPLIANCE VENTS
CURVE SHEET NO. 4
MAXIMUM B.T.U. PER HOUR

Does Home Service Appeal to Young People?

Efforts To Get the Interest of the Younger Generation Are Usually Successful

By KATHLEEN ATKINSON
Director, Home Service Dept., Providence Gas Co.

Kathleen Atkinson

WHAT are we doing to interest young people in cooking? Briefly, we are offering them classes in the evening, when they are free to attend, and are choosing subjects that meet their needs and appeal to their imaginations. We hold classes four afternoons and three evenings every week; those in the afternoons are attended largely by older women, while the evening courses draw the younger folks. I think I can say safely that sixty-five per cent of these latter classes are attended by girls from twenty to thirty—those soon to be brides, hopefuls, and brides of a few years.

A year ago last winter we held twenty-two classes, twenty of them in the evening and attended almost entirely by girls. These were request courses given at girls' clubs or churches, and proved most successful.

Our next venture was an eight lesson course for "Prospective Brides," also in the evening, in which three hundred and eleven promptly enrolled. These were plain cooking lessons, very simply taught, and covered breakfast, luncheon and dinner dishes. Attendance and interest ran so high that last Fall, when we announced another plain cooking course, we had no trouble at all in filling our hall with eager young women. Here again, the majority of those who have enrolled are between twenty and thirty. Enthusiastic? Well, you should see them come running in if they are the least bit late, quite out of breath for fear they will miss something. And, what is more, they are all trying the dishes demonstrated and are working for the Home Service Certificate. This is something new with us and is being given to all who attend six out of the seven lessons comprising the course, and who try and report on at least two of the dishes from each lesson. Almost without exception the whole class is out for this award.

We have another course, "Pies, Cakes and Deserts," in which another four hundred have registered. This also is attracting many young people, whole groups from girls' clubs attending in a body. One club, for instance, instead of holding cooking classes of its own is sending thirty of its members to us for instruction. We have a number of club groups like this.

BREAD LIKE MOTHER'S

Of course, not all the nine hundred-odd in our present classes are young women—probably sixty-five per cent of the total number are—for some of the courses are interesting only to older folks. That these girls are sincere in their desire to "make better bread than mother baked," and even compete with her in more advanced cookery, is evidenced in

The "Workshop" of the Providence Home Service Department

a great many interesting little happenings.

Take, for instance, the girl who came to our office one day this past summer and dramatically drew from her bag a carefully wrapped piece of bread. "Taste it. What's the matter with it?" she demanded. We tasted and entered into a personally conducted lesson in bread-making. Soon after she came in again, and once more we tasted. This time she had improved, but still there was something wrong. So we advised again and suggested that she join our classes, as in the course of her visits she had told us she was keeping house for her family while her mother was vacationing, and said the family "just wouldn't stand for her cooking," to use her own words. She is a constant attendant at our classes and now declares everyone is much happier because of better cooking.

I could cite ever so many interesting stories of this nature—for our home service friends are continually telling us nice thing relative to the greater success they are having since coming to the courses. By the way, some of the brides of our "Prospective Brides Class" have made their wedding cakes in our kitchen under home service supervision. Beautiful, rich fruit cakes elaborately iced and decorated in the most professional manner, proudly borne home to admiring friends.

Our next series includes seven lessons for girls between ten and eighteen; the Girl Scouts are showing a keen interest in this course. Supplementing this we are arranging a Saturday morning cooking class over the radio for children; this will be a certificate course and reports will be mailed to me every week. We are organizing this as a "Radio Club for Girls," with membership cards, club pins and radio note books in which to take notes. Around Christmas we plan to give them ideas for their Christmas gifts and December 19 we will have a party here in our auditorium.

So you see, our plans include a large group—from ten years on. I think by the time the Radio Club and Girls' Cooking Classes get started the percentage of young people using our department will be seventy-five—for we believe in arousing their interest and having them grow along with us.

A man sent in one dollar to a concern which guaranteed to tell him how to save half his gas bills. The concern wrote back: "Stick them in a scrap book."

What the Ceramic Industry Offers

An Opportunity of Which Every Gas Company Desiring Industrial Business Should Take Advantage

By HORACE H. CLARK

Industrial Gas Engineer, The Peoples Gas Light and Coke Company

CERAMICS is one of the oldest of the arts or industries. The ancient Egyptions, Chinese and others, thousands of years ago, were skilled in certain branches of the art. The manufacture of crude pottery, which is one of the branches of ceramics, goes back four or five thousand years to time immemorial. "Firing" was probably done by the heat of the sun. Later the ware was coated with a glaze, and wood was probably the fuel used for firing. By higher firing certain kinds of pottery became partially vitrified and stoneware was the result.

About a thousand years ago the Chinese discovered that crude stone and clay could be converted into a white, translucent and beautiful substance called porcelain, and "China" ware thus got its start.

At present ceramics may be said to include nine major divisions: Abrasives, art, cement-lime-plaster, enamel, glass, heavy clay products, refractories, terra cotta and white wares. This is the grouping selected by the American Ceramic Society, a society which has done a tremendous amount of good in modernizing the ceramic industry. It has just celebrated its 28th Anniversary.

Each of these nine divisions may be still further divided, to give a clearer understanding of the scope of the industry.

The abrasives division covers such items as grinding wheels, abrasives, etc.

The art division is that branch of ceramics which devotes its activities and research to interest of the development of the artistic and decorative fields of ceramic work.

The cement-lime-plaster division includes these products, just mentioned, also gypsum, and allied industries.

The enamel division is that branch

Common Brick Burned by Manufactured Gas

which covers the enameling of sheet iron and sheet steel and cast iron, such as we find in gas stoves, table tops, kitchen cabinets, refrigerators, bath tubs, kitchen sinks and similar fixtures where the enamel is put on metal it consists primarily in the preparation of a special form of glass and fusing it, in one or more layers, on the metal. This not only prolongs the life of the metal but adds to its sanitary and decorative value.

The glass division has to do with all of the activities in connection with the manufacture and investigation of such products as window glass, optical glass, plate glass, colored glass for decorative windows, bottles, electric light bulbs, etc.

The heavy clay products division supplies all such items as ordinary fire brick, common brick and face brick for building, paving brick, hollow tile and flower pots.

The refractories division supplies all special shapes for lining furnaces, and bricks of special material, such as magnesite, silica, chrome, silicon carbide, etc.

The terra cotta division deals entirely with the work of manufacturing terra cotta.

The white wares division has numerous sub-groups, such as: 1. General wares, which include china ware. 2. The sanitary porcelain group. This covers lavatories, urinals and other bathroom fixtures where the body of the article is clay and where the enamel is fused onto the clay. 3. This covers electrical porcelain materials, such as porcelain insulators, spark plugs, etc. 4. This group has to do with floor and wall tile of the decorative type, which is frequently seen in large buildings and better class homes.

Some of the products of the ceramic industry are listed below:

Abrasives, art glass, art pottery, ball clays, bathroom fixtures, bath tubs, fauxite brick, bottles, bricks, cement, china clays, china ware, chrome brick, common brick, concrete blocks, cooking utensils, crocks, diaspore brick, domestic china, electrical insulators, enameled brick, face brick, feldspar, fire brick, floor tile, flower pots, glass pots, glass reclaimers, glassware, grinding wheels, gypsum, hospital ware, hotel china, jugs, kitchen cabinets, kitchen sinks, lenses, light bulbs, lighting fixtures, lime, magnesite brick, mirrors, muffles, optical glass, oven glass, plaster, plate glass, porcelain, porcelain ware, pottery, radio tubes, refractories, refrigerators, restaurant fixtures, saggers, sand, sanitary ware, scales, signs, silica, silica brick, spark plugs, stoneware, stoves, street lamps, table tops, tank blocks, terra cotta, tumblers, vitreous enamel, wall tile, wash bowls, window glass, wire glass, etc., etc., etc.

Heat is perhaps the most important factor in ceramics. The ancients probably used the sun's heat to "fire" or bake their wares. Later, wood was the fuel. Then came charcoal and in comparatively recent years coal has become the principal fuel. In America, coal, fuel oil, natural gas and manufactured gas are the fuels most generally used, the choice depending largely on local conditions.

The problem of heat economy is of great importance in the ceramic industry, on account of the large consumption of fuel in the drying and firing operations, ranging from ten per cent to 30 per cent of the total cost of production in the different branches of the industry.

Gas is an ideal fuel for ceramic purposes on account of its cleanliness, accurate maintenance of temperatures, absolute control of furnace atmosphere—producing neutral, oxidizing or reducing as desired—and because it is the least harmful in its effect on the refractories of the kiln or the ware being burned.

Whether the ceramic plant buys gas from the local gas company or manufactures its own gas is a question that local conditions must determine. From a gas company viewpoint ceramic business is most desirable, on account of its long hour, almost continuous demand for gas.

Several types of drier and kiln construction, such as tunnel car and continuous kilns, have been developed to obtain

Gas-fired Vitreous Enameling Furnaces

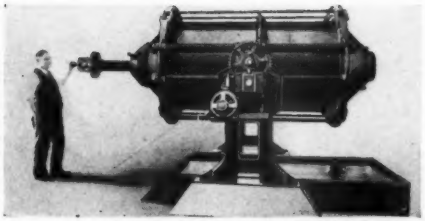
greater economy of fuel, a more uniform product and better ware. Periodic kilns will soon be obsolete, and it is when the manufacturer is changing over from the periodic kiln to the continuous kiln that serious consideration is given to the best form of fuel to use. Unquestionably, gas is the best fuel for any continuous process, and the problem then comes up as to whether the gas should be purchased from the local gas company or manufactured as an adjunct to the ceramic plant.

Among the attributes which distinguish American industry from that of other nations are those of mass production and specialization. In America the manufacturer takes hold of things in a big way, studies the best and most efficient ways of producing one kind of merchandise, and sticks to that one thing and its related or derivative products. The jack-of-all-trades has no place in the industrial world of this country.

Yet, thousands of manufacturing companies in this country still insist on maintaining a gas works as an adjunct to their business. These private gas plants with their comparatively small production call for a special department of one or more trained men, special purchases of fuel and engineering supplies and valuable space in the factory. The manufacturing executives find the plants a source of continual irritation, which is entirely out of proportion to their importance.

Users of fuel oil and coal for industrial purposes are included in the above. In reality they are operating miniature gas plants, because all fuels must be in the form of gas before combustion can take place, and in these instances the gas is generated in one part of the furnace, in a very inefficient manner, and burned in another part of the same furnace to do the necessary useful work. Obviously, a furnace cannot be a good gas generator and a good heating appliance at the same time.

Today the private gas plant is in no way a necessity except in special instances. The gas lines of the local gas company pass by the door of most plants, ready to supply all the gas which the factory needs at less cost and in a more reliable manner than is possible from privately operated plants. The wide-awake manufacturing executive will grasp this chance of delegating to the central station the task of producing the



Rotary Enamel Smelter

comparatively small amount of gas which his factory may need, thereby entirely unloading the responsibility for the continual production of gas for his factory. He thereby calls to his aid the services of a fuel specialist and can devote all of his own time to his own product.

Gas companies should pay special attention to the ceramic plants in their localities and be prepared to supply all the gas they need. For a progressive gas company that wants to grow and be a merchant, and not just a public servant, there is no better way to get quantity production and low cost of operation than to get some of this big industrial gas business. This is the wholesale competitive field, corresponding to the power business of the electric companies. If the local gas company does not go after this big business, it will find private gas plants springing up in the community, because gas is the best fuel for industrial heating purposes, especially in ceramic plants, and if the local gas company will not supply the demand, the customer will build his own plant, or what is worse, a group of industries might combine their gas requirements in one large private plant.

Now is the time for gas companies to get into the wholesale gas business. Fortunately (or unfortunately, depending on how you look at it) the popularity of gas as a fuel for large heating operations has not reached the stage in the economics of the Nation that electricity for power has reached; therefore, there is yet time for the local gas company to get into this wholesale industrial business. Get in now, before you are forced in; then you will like it better and, besides, you will find the wholesale end of your business more profitable than the retail.

As examples of what the gas business amounts to in certain branches of the ceramic industry, I have analyzed a few of the operations where manufactured gas is being supplied by the local gas company. There are many more of which I don't have first hand knowledge. There are large numbers operating their own gas plants—some straight producer gas, some clean producer gas and a little blue gas. Some ceramic plants are operating on fuel oil. A large number of the old type plants using periodic kilns or full muffle furnaces are on coal. However, it is the general belief that gas will be the ultimate fuel, because it is the best and, everything considered, the cheapest. It might surprise you to know that there are perhaps a dozen ceramic plants in the United States using electricity for heat, especially for vitreous enameling. These are special cases, however, and are not due to any inherent advantages of electricity.

A tunnel kiln is a good example of an ideal gas load. For example, in a plant manufacturing sanitary ware, such as closets, tanks and bowls, they usually have two such kilns: one called a biscuit kiln (firing the bisque ware) and the other called the Glost kiln (producing the glazed or finished ware.)

A pair of these tunnel kilns use gas at about the same rate per hour, every hour of the day, every day of the month, year after year, barring accidents or shutdowns due to strikes, poor business, etc. Such a pair of kilns have a combined maximum hourly demand of 15,000 to 20,000 cu. ft. of 500 B.t.u. gas. The combined monthly consumption averages between 10,000,000 and 14,000,000 cu. ft. of gas.

Tunnel kilns are also being used for burning terra cotta, brick, spark plugs, china ware and many other ceramic products. The gas consumption varies, depending on the time, temperature of

(Continued on page 366)

Academy of Music Closed Forever

History of Seventy-two Years Recalled at Final Ceremonies Given by the Consolidated Gas Company

RINGING down the curtain on the past is simply the farewell to the old, followed immediately by the rising of the curtain on new scenes, the fanfare of trumpets, the march of progress. The old is old; the new is new—the stately tread of memory becomes the martial step of new things, new lives, new people.

From four to six o'clock on May 17, fifteen hundred people gathered at the Academy of Music, 14th Street and Irving Place, New York, to recapture the flavor of the 19th century. At six o'clock the Academy's last program was over. The Academy, the cradle of opera in New York, was no more. Work is now under way to replace the old theatre with the new office building of the Consolidated Gas Company. The music that once enthralled the Academy patrons becomes the tapping of the riveting machines as the steel workers raise the skeleton of the new building on the ashes of the old.

The program was arranged by the Consolidated Gas Company as a touch of sentiment and as a memorial tribute to the Academy for those who consider it a symbol of the past.

Architect's Drawing of the New Building Being Erected by the Consolidated Gas Company

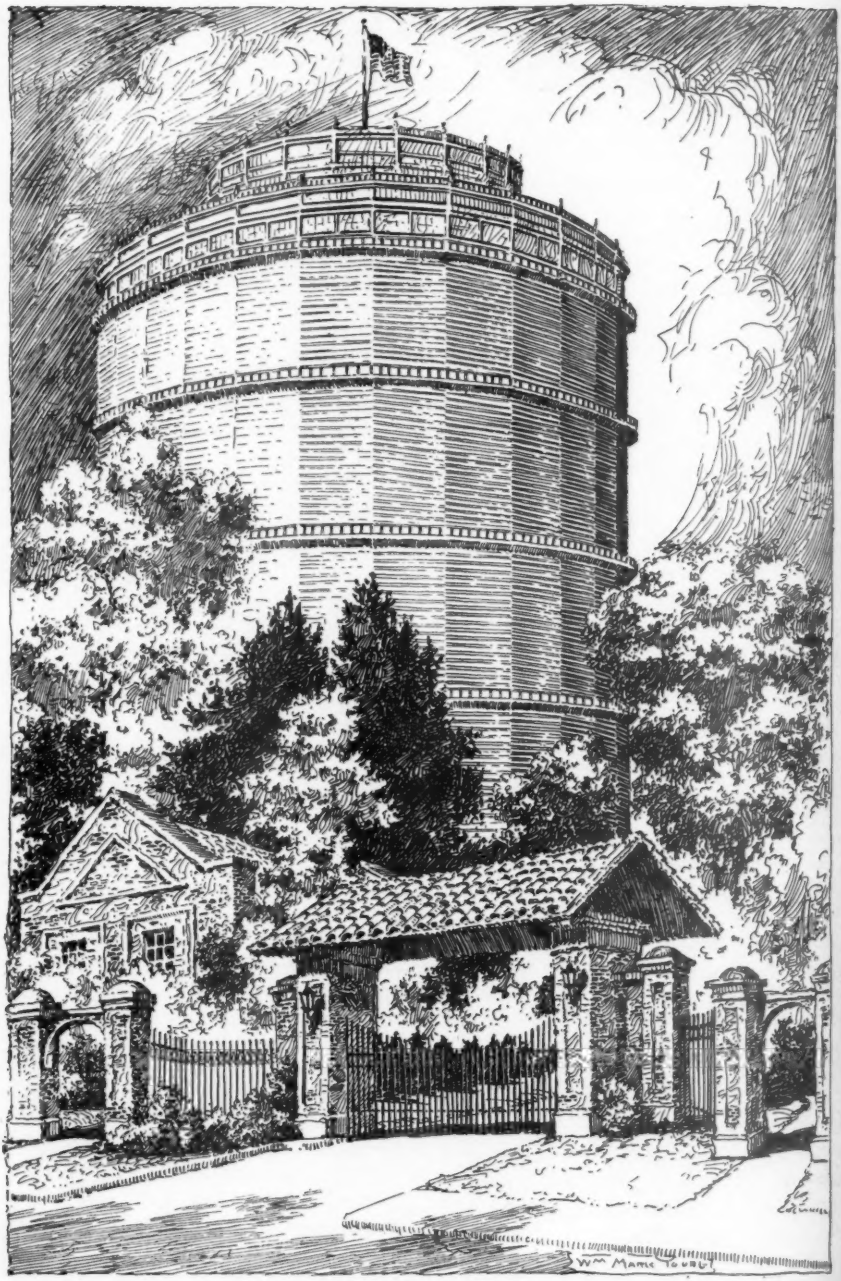
As closely as possible George B. Cortelyou, President of the Consolidated Gas Company, as the host of the occasion, had revived the surroundings of a half century ago.

An aria from "Norma," the first opera staged in the Academy, opened the performance. After the overture Mr. Cortelyou reviewed the history of the Academy.

"Many masterpieces of composers," he said, "received here their first presentation. Great figures of the drama recited their lines here and preachers thundered against the evils that were thought to threaten the body politic. Educational enterprises, later to count for much in our life, had their inception here, and great social gatherings were held within these walls. The Academy was not merely a playhouse. It was more than that; it was an institution. We salute the old Academy, and as it passes from us the fairy wand of memory beckons us to the glorious days of the past."

Mme. Frances Alda, Metropolitan Opera Company, sang several selections. Otis Skinner spoke of the early days of the Academy, and Joseph V. McKee, President, Board of Aldermen, New York City, spoke on the progress of the

(Continued on page 340)



The Gas Holder Has a New Dress. The Peoples Gas Light and Coke Company, Chicago, Ill., Have Made Their New Holder a Thing of Beauty

Good Public Relations Sells Good Coke

By WILLIAM A. RICH

Superintendent, Gas Production Dept., Syracuse Lighting Co., Syracuse, N. Y.

SYRACUSE, the Central City, as it is frequently called, from its geographical location in New York State, has a population of about 185,000. There are several villages in what has become the outskirts of the city, ranging in population from a few hundred to four or five thousand, and which are destined to become a part of the city in the near future. The country surrounding the city is extremely fertile and is devoted principally to market gardening. Up to 1913, coal gas was manufactured by the Syracuse Lighting Company, the equipment consisting of stop end retorts, the coal being carbonized for four hours. This produced what used to be known as "gas house coke," an inferior product, no attempt having been made to size or screen it; in fact, it was considered good practice in those days to get rid of as much breeze as possible on the consumer's rigs. In spite of the inferior product that was furnished there was always demand for the small amount of coke actually produced for sale, and for a long time after the manufacture of coal gas had been discontinued, inquiries would come in regarding the purchase of coke.

Two or three years after this the Solvay Process Company, which had a battery of ovens at its Syracuse plant, began to furnish coke for domestic purposes. This was without question a very much higher grade coke than that which we had ever furnished, it being sized, screened, and much harder. That company gave good service but seemed to be unable to recover the trade which we had previously had, principally, I think, because it did not look like the coke which the consumers had been in the habit of using and on this account a great many were skeptical about trying it. After two or three years of this, the ovens which were very old were let down and it was decided not to rebuild them. From then on the only coke for sale in Syracuse was handled by one or two local coal dealers, and no particular attempt was made to work up a coke market.

When it was decided to build a vertical retort plant in Syracuse, one of the first questions to arise was the disposal of the coke. Conditions and methods in several of the nearby cities which were producing coke for retail trade were carefully studied and information obtained from these places was carefully gone over, some parts changed or additions made where necessary to adapt it to local conditions, and were used as the groundwork for our selling scheme. This part of the service was eventually put entirely in the hands of Joseph Butler, then superintendent of gas production, and the success which has been attained proves that no mistake was made in placing him at the head.

It was early decided that the selling would be handled by our high speed all service representatives, locally and affectionately known as "Bill Jones," they to receive a commission of 25c per ton, in addition to their regular wages. As their duties naturally brought them in contact with all classes of our consumers, it gave them an unusual opportunity to introduce the new product. Orders for coke could be taken by any company employee, but the Bill Jones organization only was to receive any commission for this work. The number of orders coming in from the various parts made it evident that no mistake had been made in this part of the set-up.

The sales campaign was started in earnest early in 1925. Some trial orders were accepted but the majority of these

were for the heating season of 1925-26. It must be remembered that while sales were started in February, the plant was not put into operation until May 7, 1925, at which time we had orders for practically one-half of the coke we would be able to produce up to April 1, 1926. The first delivery of coke was made on May 8.

It was decided very early in the program that neither pains nor expense would be spared to make our deliveries and service the very best possible. With this end in view we purchased very high grade trucks of the hoist dump type, this hoist, by the way, being exceptionally high, and allowing the rear end of the body to be elevated eight feet above the ground. This feature has proven very useful and has aided materially in cutting down the number of carry jobs.

Following along the line of exceptional service a great deal of attention was given to the drivers of these trucks. The result is that our drivers are of a much higher type than men ordinarily engaged in this work. In order to obtain men of this type it has been necessary to pay better wages than usually paid for this work, but from the numerous phone calls and letters received complimenting us on our methods of delivery, service rendered, and the men employed, together with the fact that we have trucks working in all kinds of weather and road conditions, and have not had a single serious accident, we are convinced that we were again right.

The following is a fair sample of some of the unsolicited letters which we have received and, as our patent medicine friends say, "name and address can be furnished upon application:"

A week or so again you delivered to us two tons of coke. We had had two tons from a leading coal dealer previous to this. I am writing to express to you our appreciation of your service. It was really surprising to note the politeness of your men in contrast to the others. One bunch growled; the other seemed to wish to please us in every way, and acted like gentlemen and Christians. Then too, the price was appreciated, $11.25. We paid several dollars more per ton for inferior stuff from the other people. The fire works right with what we have now and it must be a pleasure to you to know that you have rendered us genuine service in this period of scarcity of fuel.

We have not found it necessary up to the present time to do any great amount of advertising. What little we have done has been through the newspapers, the principal object of this being to get our trademark, which is in the form of a large question mark composed of blazing coke with the slogan underneath "Answers the Burning Question," before the public; this idea is the brain child of James Doak, at that time a cadet engineer at Syracuse, and now in charge of the coke sales department at Manchester. Another point is that the name "coke" is never used in connection with our selling, but rather our local trade name "Sylcoke" which is composed of the initial letters of the company name and ending in c-o-k-e. This name was brought out by our President, James C. DeLong, and both the trademark and trade name appear in all of our advertisements and are given a very prominent place in the lettering on the coke delivery trucks.

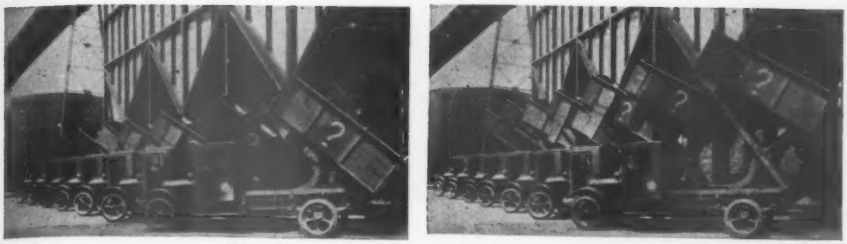
Even as prosaic a business as selling coke has its amusing features, as witness the following letter received in February, 1925, a few days after Bill Jones began to sell coke to our consumers:

DEAR SIR!

Regarding your new fuel supply named "Sylcoke" I would like to find out if I could use "Sylcoke" in a big furnace where I always have used Stove and Eggs coal mixed; it probably will be a different in sise of this coke, as well as with the other coal.

A man send by your Co. was in my house twice so far, but I never was home, because I am working during the daytime; except Saturday afternoon. As my wife does not understand the language very good, I know just as much as before; he ought to leave a note here, what he came for; I don't know, if he was here for explanation or for taking orders. Now as I cannot stay home and wait for this man I would like to find out, what I have mencioned above.

When "Sylcoke" could be used in a furnace, like other coals, I would be glad to get a ton right off, to try them out, before I will order the whole supply for next winter.



Part of the Syracuse Coke Delivery Fleet. At the Left the Dump Bodies Are Shown Tilted. At the Right They Are Elevated and Tilted.

I am short on other coals now and I would need about one more ton, because it seems the winter is not over yet.

Trusting you to get a little more information

I remain
truly yours.

It would be very interesting to know just what effect the anthracite strike had upon our coke business last winter. The fact that we had practically sold our entire output by September 1 leaves no doubt in our minds as to our ability to have disposed of our entire output even had the coal situation been normal. So as we see it, the only real advantage or help that we received owing to the fuel situation was the fact that it undoubtedly placed coke in a great many homes which otherwise would not have considered its use. This gives them a chance to prove to themselves its value as a domestic fuel and to note the exceptional service we are giving, coupled with the fact that while the dealers were charging as high as $22.50 per ton for oven coke shipped into the city, our price remainded at our original fall figure of $11.25. This has left a very good impression with the general public and will undoubtedly result, in a great many cases, in orders for next season's supply.

Another question which was brought up early in the season and was emphasized by the shortage of coal was to what extent we would do business with the local coal dealers. This apparently never worked out entirely satisfactorily to all concerned, one of our chief objections to it being the fact that they do not give the consumer the personal attention and follow-up service which we consider part of our sales. We have 24-hour service on coke complaints, the night work being handled by the distribution department, in connection with the regular trouble calls and gas supply, and the public have been informed that if any trouble is experienced in the use of coke, day or night, a phone call will bring one of our men to give such information as may be necessary. This service has been extended to all users of coke, whether purchased from the company or from a local dealer, and has undoubtedly left a very good impression.

Sales for next season's supply were started this February, the first day resulting in 8500 tons being sold. We estimate that we will have 90,000 tons of marketable coke for sale this coming year. This takes into account that made by the second unit which is being built at the plant and which we expect will be put into operation some time in June. At the present time, after two weeks' selling we have reached the point where we are checking up very closely to see how much longer sales may be continued.

Now that the anthracite strike has been settled, it is quite possible that we will receive more than the usual number of cancellations, as all orders are taken with the understanding that the purchaser may cancel any or all at his pleasure. But, inasmuch as we are now reaching the danger line in our sales for next season's supply, and the fact that we have left 11 months in which to sell

the balance, there is no doubt in our minds that regardless of the fuel situation we will again be refusing orders next winter owing to our inability to fill them.

About a year ago, in an article which appeared in *The U. G. I. Circle*, a prediction was made that before the year was over our coke office force would be busy explaining to prospective customers over the phone that we were very sorry but we were unable to take their orders. A few minutes' stop in the coke office at any time on any day would be ample proof of the truth of this prediction. The only criticism to be made was that it was not nearly emphatic enough, as the calls came in so rapidly that the coke office force was not able to handle them, a great many of them being switched to the customers department at our Warren Street office.

Every one connected with the coke department, in fact I might say, The Syracuse Lighting Company Inc., has had a few peeved friends during the past winter, owing to the fact that any one out of fuel immediately began to sum up his list of acquaintances to see if by chance any of them were connected with the company, hoping that through their influence he would be able to obtain fuel, but we are proud to say that we strictly adhered to our original policy of dealing absolutely fair, without fear or favor.

With the second vertical unit in operation we will produce approximately one-fifth of the domestic fuel required in Syracuse. Judging from our past experience there will be no more difficulty encountered in disposing of our increased output than there was with that of the first unit during the past year.

As concerns the territory immediately surrounding the city, this has, with but few exceptions, remained untouched, the few exceptions being principally the market gardeners who operate hothouses during the winter and who were progressive enough to see the possibilities, and placed their season's orders last summer. These, without exception, have been very much pleased with the results obtained and have not hesitated to recommend it to their friends and neighbors, a great many of whom are engaged in the same line of business, and we will undoubtedly obtain an ever increasing amount of unsolicited business from this section.

We are proud, and we believe justly so, of the record we have established during the last year, and as we are never satisfied with the results obtained regardless of how good they may be, we feel sure that with the experience gained during the past year we will be able to attain still better results in the year to come.

Academy of Music Closed

(Continued from page 335)

city. The New York Symphony Orchestra rendered two selections. "Memories of the Fifties" was the title of several songs given by the Gas and Electric Choral Society. The program ended with the singing of "Home, Sweet Home," by Madame Alda.

As far as is know, this is the first time that a corporation has ever held such exercises. New York newspapers have featured the event, in almost every case calling attention to the spirit that prompted the gas company to give the affair.

SEND YOUR ORDER NOW

THE Editor has received requests for reprints of the article in the April issue of the MONTHLY by John Weedon, entitled "We All Do Better When We All Use the Slogan 'You Can Do It Better.'" This thought-provoking article concerned the A. G. A. slogan.

Although the requests for reprints did not come in within the thirty-day period usually allotted for reprint orders, special arrangements are being made to furnish reprints if sufficient requests are received. These prints will be sold at the actual reprinting cost, which will be approximately $20 a thousand.

All those desiring reprints should send in their orders as promptly as possible.

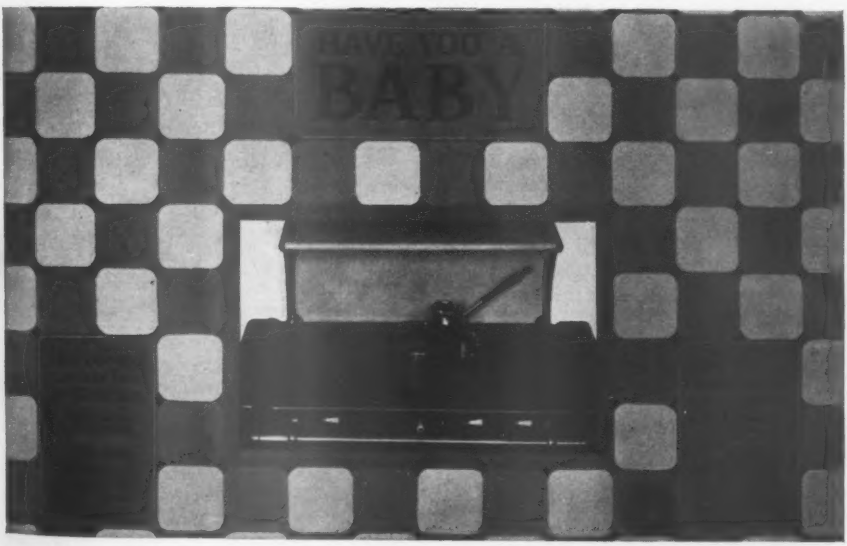
The Human Element in Window Displays

There Are Three General Types of Mind to Which the Gas Company Must Appeal

By R. M. MARTIN
Director of Display, Consolidated Gas Company of New York

WHILE a certain few of the larger public utility companies in the United States have made notable progress in the effective use of window displays within the past few years, it is still a curious fact that the vast majority of smaller corporations do hesitate to set aside an appropriation sufficient to develop this most intimate publicity medium. The Consolidated Gas Company of New York now maintains its own studio with competent craftsmen and the most modern technical equipment for the production of window displays which dramatize the usefulness of the various appliances and fixtures for heating and cooking, et cetera, in the modern home. Considered from a certain angle, this phase of a gas company's relation with its public is an important factor in sales promotion. But in a larger sense, the window display, conceived and constructed with proper care, is a flexible and conductive medium for the improvement of public relations.

Even the most strictly commercial window display—one designed to create an impelling desire for ownership in the mind of the passerby—must have in it some arresting element of human appeal. The day of the indifferent, price-tagged display of merchandise has, unquestionably, passed, just as the practice of inserting "cards" in publications has passed completely from the realm of modern advertising. A commodity must be displayed in an attractive setting, preferably one which imaginatively illustrates some phase of the service which it renders, or occasionally, the power be-



A Display Calculated to Play upon Certain Human Emotions

hind that service, as in the case of a public utility. Fortunately, this is not a difficult task with gas appliances as they lend themselves readily to a very human treatment.

The need of an arresting element of human interest in the display, however, cannot be too strongly emphasized. The mere lack of it defeats the proper function which, by its very location, it is destined to perform. The window display is perhaps the most intimate public contact which a public utility company can possess. It meets the public, so to speak, "on the street." Its immediate audience may be calculated by the density of the passing throng. In the case of a gas company, every individual who passes its location is an impressionable prospect for the particular conception of the company's service expressed in the display. Depending largely on the individual, he regards the gas company as either some indefinite and mystic sort of giant or machine—a Big Corporation—or as a public service corporation composed of beings who are altogether as human as himself. Or, as in the case of the great majority of people, he does not consider it at all; it is merely a public service, a normal part of a great civilization to which he has grown accustomed to a point of callousness.

Consider now the reactions of such minds to the window displays of their local gas company. If it is merely a fairly attractive showing of merchandise—appliances and fixtures—it will certainly not serve to alter the distorted conception in the first type of mind, nor will it be of any particular interest to the second type. In nintey-nine cases out of one hundred it will not even attract the conscious attention of the third and most common type. Such windows have fallen short of the part they were intended to play in the program of sales promotion. Their general publicity value is nil. At best they are little more than a stereotyped part of the building's facade; they simply serve to fill the gap in the building's street floor frontage.

A company in this situation is confronted with the popular problem of window display. The gas range, the radiant heater and the water heater are all commonplace appliances. Their natural appearance is not generally conducive to any romantic or imaginative association in the public mind. The mere truth that they do make very considerable contributions to human comfort does not occur spontaneously to the individual confronted with their display. This factor may be gently and yet forcefully suggested by the display artist. At this point his imagination comes into play.

The gas range used in the hypothetical display mentioned before may have been the same type of range used in the display reproduced here entitled "Have You a Baby," and yet the reaction of the passerby is obviously of a different nature. Here, instead of displaying an attractive range with its nickel and porcelain trimmings properly polished, the display artist calculated to use it under such conditions as to play on certain definite human emotions. It is set in a background, which, though it has a direct relation to the theme of the display, has also an attractive element of its own. The appeal is entirely human. The message likewise tends to foster a feeling of intimacy and warmth between the company and the customer. It performs the twofold function of sales promotion and the improvement of public opinion.

The "Pie History" display illustrated here is another instance of the effort of a display department to dramatize, or "humanize," if you will, the service of the gas range. Here the figure of a man is seen looking into the oven of a range and at the same time apparently engaged in recording someting in an open book which is set on an easel to his right. The oven contains a pie. To the left one sees another volume, larger than the range itself, labelled "Pie History." The open book contains the legend, "Pie History

Dramatizing the Gas Range May Seem a Difficult Feat, but This Display Does it Very Effectively. "Pie History" Appeals to All, For All Are Lovers of Pie.

began when pie was first baked in an . . . gas range."

Seasonal holidays have for years been the joy of even the smallest shopkeepers, insofar as window decoration is concerned. At Christmas every business house possessing a street floor display window resurrects a dusty Santa Claus, with the appropriate snow and fir boughs. At Thanksgiving there is always the eternal turkey and pumpkin, at Eastertide the time-worn chicken-and-egg motif. Of course, in all of these banal illustrations, there is always the attempt made for a "subtle" tie-up between the seasonal need and the mercandise on sale.

In an effort to create a display that would be appropriate for the Easter holidays, and present one of the beautiful consequents of the commercial use of gas, the Consolidated Gas Company display studio executed the stained glass window display reproduced. The three-dimensional suggestion of a cathedral wall was constructed and a stained glass window, valued at two thousand dollars, was placed therein. The floor of the window was covered with a suggestion of old flag stones with grass sprouting in between. Medieval candlesticks of wrought iron and heavy earthen oil jugs were included in the decorative scheme. An indirect lighting system in back of the stained glass window was used in addition to the regular window lights. Although the design of the stained glass window was not of a distinctly religious nature, the medieval setting of the display gave it the appropriate suggestion of Easter. One sign in the foreground bore the copy: "The use of gas heat in the production of stained glass windows is but one more application of gas to the arts and industry."

Considering again the three general types of minds and their respective conceptions of the serving gas company, it is not difficult to follow their reactions to the human interest type of window display. Any one of the displays mentioned above will have an entirely constructive influence on the first type, the one who looks upon the company as the giant, the inscrutable machine. These displays present the gas company to him in a new and altogether human way. He sees, perhaps for the first time, that the company consists of human beings bent upon a

An Easter Window That Told About Industrial Gas

common human service, and in reality supplying him with a commodity that figures largely in the comfort of his home. Little need be said for the second or observing and understanding type.

However, the display is created, in reality, for the third or "take it for granted" type—the great majority. It is only necessary to attract their attention to the display; the rest is simply a matter of illustrating the part which the gas company plays in supplying the comforts and conveniences in their home life. It must be remembered that this is the type of person who "never gave it a thought." They have lived so long in a civilization where every convenience is at their finger-tips at the moment when they happen to need it, that they have simply grown accustomed to all conveniences and use and accept them mechanically. Thus, it is when they are confronted with some illustrated use of an appliance at a moment when they least expect it, an attractive window display, that it is easiest to divert their minds to a consideration of the larger aspects of the service which they are daily accepting from the gas company. It is an informal manner of education and, incidentally, one that works hand in hand with a program of sales promotion.

Display windows, then, are invaluable advertising space, space that is far too valuable to be misused or wasted. They repesent an intimate public contact and must, therefore, be manipulated with the greatest care. The display manager must know beforehand, exactly what psychological effect he is striving for and must execute his displays in such a manner as to implant his idea firmly in the public mind.

Industrial Gas Booklet

GAS, the Ideal Factory Fuel, is the title of the booklet sent by the Association to those manufacturers who, on seeing the industrial gas advertisements in the trade papers, write for further information.

The Association has had many requests to supply quantities of these booklets directly to the gas companies. A reprint has been made, and copies can now be furnished at ten cents each.

Orders should be sent to Association Headquarters.

Football and Gas

WHEN the Army-Navy game is played on Soldier's Field, in Chicago, next fall, the participants will wash up in the Stadium dressing rooms with hot water heated by gas. Other stadia in the country have adopted gas for heating water, as economies can be effected since hot water is needed but a few hours a week.

SPECIAL GAS SECTION IN OREGON NEWSPAPER

THE Sunday, April 18, issue of the Oregonian, Portland, Ore., contained a special gas section entitled "Women's Features and Latest Home Uses for Gas." It contained news items of interest to gas users, and advertisements of the gas company and local dealers.

The publicity was complete, comprehensive, and attractive in form. It proved, conclusively, that it is possible to tell the public the story of gas through the newspapers.

John H. Hartog, sales manager, Portland Gas and Coke Company, Portland, Ore., was in charge of this work.

How the Laboratory Tests Gas Ranges

Safety and Convenience are Stressed to Determine Compliance With A. G. A. Specifications

By R. M. CONNER
Director, Appliance Testing Laboratory, Cleveland, Ohio

R. M. Conner

OUR Testing Laboratory investigations on gas ranges to determine their compliances with the present A. G. A. Approval Requirements for gas ranges may be divided into two major classes: First, those which insure the customer substantial and durable construction as well as convenient and efficient service; and second, those which insure him safe operation providing he uses his appliance in an intelligent manner. While serviceability is an essential factor, safety to the customer is our primary consideration, and the Laboratory's most careful tests and efforts are directed toward the determination of this feature.

Our safety tests include a fire hazard test made with all burners operating at their maximum rating, temperatures at points six inches from the sides and back being taken. These readings are taken at six-inch intervals on both horizontal and vertical planes to avoid missing any hot spots which might occur on any part of the range.

Leakage tests are made on the gas cock and range manifold and other essential gas pipe fittings on the range. These determinations are made at a pressure relatively 16 times those at which the average city gas is supplied, assuring a rather large factor of safety against leakage in ordinary range installation.

A test is also made to determine the pressure required to open broiler and oven doors which indicates whether any damage will result should an explosion occur from delayed ignition of the gas. Our most exacting and most important determinations are those covering completeness of combustion. Samples of products are taken from all burners and analyzed on an apparatus capable of determining the most minute trace of incomplete combustion. Readings are taken over a very wide range of operating pressures, thus assuring almost complete absence of any tendency toward incomplete combustion even in view of a fluctuating pressure which might result on the customers' premises.

Gas ranges are also tested for their ability to meet low pressure service conditions. All burners are tested for their heating capacity at a very low pressure, and even under these conditions must be able to supply a sufficient amount of heat with satisfactory combustion for the usual cooking purposes.

Where baking ovens are controlled by thermostatic equipment, the accuracy of the regulator is very carefully checked. Actual oven temperatures are obtained for various settings of the regulator and these figures check against the various settings on the dial. This information is determined by use of a recording pyrometer which gives a visual picture of the entire operation of the thermostat.

Actual baking tests are made which not only give evidence of the fact that the temperatures throughout the oven are reasonably uniform, but that the appliance in question will actually bake and give the service for which it is intended.

Broiling tests are likewise made in the broiler to insure uniformity of heat distribution from the broiler burner.

About 75 per cent of our time is devoted to tests that are either directly or indirectly connected with the matter of safety. But, this should not be and is not the only consideration given during our

(Continued on page 378)

H. D. Whitcomb Dies Suddenly

Henry D. Whitcomb

HENRY D. WHITCOMB, vice-president in charge of gas operation, Public Service Electric and Gas Company, died suddenly May 8 in his office in Public Service Terminal Building, Newark.

Mr. Whitcomb, one of the best known gas men in the country, was born in Richmond, Va., September 26, 1869. After graduation from Stevens Institute of Technology in 1892, he was construction engineer on a steam railroad, and later went to The United Gas Improvement Company as a cadet engineer. He afterwards became construction engineer and at one time was temporary superintendent of the Atlanta Gas Company and later of the Savannah Gas Company. In 1898 he became a traveling expert operating engineer.

In 1901, at the time of the explosion in the Front Street Gas Works, Mr. Whitcomb came to Newark to take charge as assistant to A. H. Strecker, engineer of the Essex and Hudson Gas Company who was injured in the explosion. He remained in that capacity until the formation of Public Service Corporation of New Jersey in 1903 when he was made general manager of the Gas Department. In 1909, when Public Service Gas Company was formed, Mr. Whitcomb became vice-president and general-manager, the title being changed to vice-president in charge of operation, Gas Department, when the Gas Company and Electric Company were merged in 1924.

Mr. Whitcomb leaves a widow, a daughter, Mrs. David Keep, and two sons, Henry Donald Whitcomb, Jr. and John Gray Whitcomb. Donald is a cadet engineer in the five-year general course.

The funeral was held May 10 at St. Luke's Episcopal Church, Montclair, which was attended by a large representation of Public Service people from all deparments. The remains were taken to Richmond for interment, being escorted by these men from Public Service: vice-president Dudley Farrand, John A. Clark, Jr., Herbert H. Ferris, James G. O'Keeffe, William H. Pettes, George W. Curtis and Henry W. Nicolson. The U. G. I., the Society of Gas Lighting and the A. G. A. Headquarters sent delegations to the funeral.

Resolutions of respect were adopted by the Executive Board of the A. G. A., the Eastern States Gas Conference and the New Jersey Gas Association. Mr. Whitcomb was first vice-president of the former body in 1925 and was made a director this year. He was president of the New Jersey body in 1925.

House Owning vs. Apartment Renting

SOME light is thrown on the perennial question of whether it is cheaper to buy than to rent by some building cost figures compiled by the Alexander Hamilton Institute, says a bulletin of the Research Bureau of the National Lumber Manufacturer's Association. According to these figures a duplex frame house may be built for as low as twenty-seven cents a cubic foot, and the highest grade detached frame house can be built for forty-four cents. High class apartments cost seventy-seven cents a cubic foot; cheap ones, forty-two cents.

It would appear from these figures that the investment in one's own house of the best quality would be only half as much as the sum on which he would have to pay interest in a high-grade apartment. In other words, it appears that a detached frame house of the best quality may be built for half the cost of an apartment suite.

The Modern Method of Collecting Drips

The Neat Appearance of the Apparatus Is a Factor from the Public Relations Standpoint

By F. A. BAKER
General Superintendent, Connecticut Power Company, New London, Conn.

A TASK in gas distribution which is ever a problem is drip pumping. A survey of trouble calls nearly always shows complaints of "no gas" with the explanation that a main drip is filled up and even if a well-ordered schedule has eliminated worry on this score, the problem of a drip wagon is apt to be troublesome.

Picture of New White Truck Used for Collecting Gas Drips.

Often an old truck is fitted up with a tank which has been discarded from some other service, a second-hand pump is secured and a makeshift arrangement is patched up to be used for collecting condensate from gas main drips.

In New London we have in operation a schedule for collecting condensate so that our cases of full drips are very rare. We had not solved the problem of collection satisfactorily until our present tank wagon went into service.

Our present drip wagon consists of a Model 15, White truck, 1¼-ton chassis, equipped with a 30 h.p. motor and having a capacity of 2500 pounds. On this chassis is mounted a 300-gallon welded-steel tank with a partition dividing it into two compartments, one of 75 gallon capacity and the other of 225 gallon capacity. Mounted on this same chassis and driven from the power take-off of the horizontal transmission is a pump so connected to the two compartments of the tank that condensate can be pumped into either tank, out of either tank, from one to the other, or, by by-passing the tanks, the pump may be used for other purposes. This arrangement allows us to collect high pressure drip water in one tank, low pressure drip water in the other, or to carry alcohol for thawing drip risers in one tank and collect condensate in the other. We may use the smaller compartment as a gasoline tank, supplying jobs about the city and so on.

The pump which we use is a rotary gear pump equipped with a meter and a filter. The meter allows us to make a record of the amount of condensate removed from the drip so that we may check our schedule of drip pumping.

At first we had no filter, but it was soon apparent that bits of rust, scale and dirt which were pumped out of the drips were damaging the meter and pump so that the filter proved to be very necessary.

To some people this equipment may appear to be elaborate, but with it our problem of drip pumping is no longer a matter of concern and has become a routine matter. There is small possibility of spilling condensate on the street near the drip riser. With approximately 400 drips in our system we find that our drip man can do considerable in the course of a day besides pumping drips. For example: By using the smaller of the tanks as a container for gasoline we

have a portable depot for air compressors, gasoline driven pumps, etc., and other tools used on street main work. With a trailer it is possible for the drip man to supply service crews with materials and tools while doing work. The accompanying photograph shows the good appearance which this equipment makes and from our standpoint this matter of good appearance is a factor in good public relations.

Merely a Matter of Interpretation

A NEWSPAPER which is an ardent supporter of municipal ownersip recently said:

"The little city of Lodi is the best lighted in California. Its thoroughfares are illuminated by 553 electroliers, or one electrolier to each group of 14 residences. The big thing is that the illumination of Lodi's streets is absolutely free. The only cost to the residents is the original purchase of the electroliers, the city installing them and furnishing the lights without charge. Municipal ownership is the answer to the query of how and why."

It has been a well recognized fact for a good many centuries that some one "pays" for everything in the world. There is nothing "free." Even a child knows that electric lights cannot be furnished free. One group of persons may get lights without any monthly charge, but they are not free—some one pays the cost for producing them.

Investigation of the tax rate in Lodi shows that while street lights may be "free," the "charge" for "taxes" has been steadily climbing. In 1921 the tax rate was $1.25 per $100; in 1923 it was $1.50; in 1924 it was $1.70; in 1925 the rate was cut to $1.60, but this does not include a special assessment of $42,000 for street improvements, which would add 76 cents to the tax charges, making the present rate $2.30 against $1.25 five years ago, or an increase of 88 per cent. The increased tax revenue, besides paying for the electroliers, also accounts for the surplus in the Lodi city treasury which public ownership advocates attribute to the municipal power venture.

Neither Lodi nor any other city gets free electric lights. Consumers pay, through taxes or otherwise, for any service which they receive.

Professor Parr Wins the Chandler Medal

Prof. S. W. Parr

THE Chandler Medal, awarded annually by Columbia University for achievement in science, was presented to Samuel Wilson Parr, Professor of Chemistry at the University of Illinois, at ceremonies held recently in Havemeyer Hall, Columbia.

In delivering the annual Chandler lecture Professor Parr, who has been called America's greatest expert in the chemistry of coal, told of the discovery of new methods for the production of a smokeless coke of special utility in households.

The new methods, discovered after years of research at the University of Illinois, said Professor Parr, make it possible for the first time to use the coal mined in the Illinois fields for the production of coke. The use of low temperatures played a large part in the discovery of the new methods, he said:

"The coke produced by the new methods," said Professor Parr, "is smokeless and especially adapted to household appliances, while the by-products are of especial interest because of the fact that under the conditions prescribed a very considerable yield of gas is obtained. The other main by-product, the tar, is of interest because of its type, which has an established commercial value."

The Chandler Medal was established in honor of the late Charles Frederick Chandler, one of the founders of the American Chemical Society.

The Small Gas Plant and the Large One

We Sometimes Look Down on the Job of Managing the Small Gas Plant; However, Here's Something to Think About

By J. A. BROWN
Gas Engineer, Consumers Power Company

THE operating problems in a small gas manufacturing plant are so different from those in a large plant that a comparison should be interesting.

It has always been the writer's contention that greater skill is required to operate successfully the small plant than to operate the larger one. In the small plant the expenditure of every dollar is of such importance in the monthly cost sheet that extraordinary caution is taken and resourcefulness exercised to avoid the expenditure. The small plant has nearly the same equipment as the large one, differing mainly in size. Any lack, loss, or failure to function results in a much larger loss in efficiency in the small operation. Any additional labor or repair expense so looms up in the cost of gas in the holder that the small plant operator is particularly skilled in avoiding such expense.

To illustrate this, we may compare say, the smallest gas manufacturing plant operated by the Consumers Power Company, at Grand Ledge, Michigan, to the largest one, at Flint. Coal gas is produced at Grand Ledge, whereas both coal gas and water gas are produced at Flint.

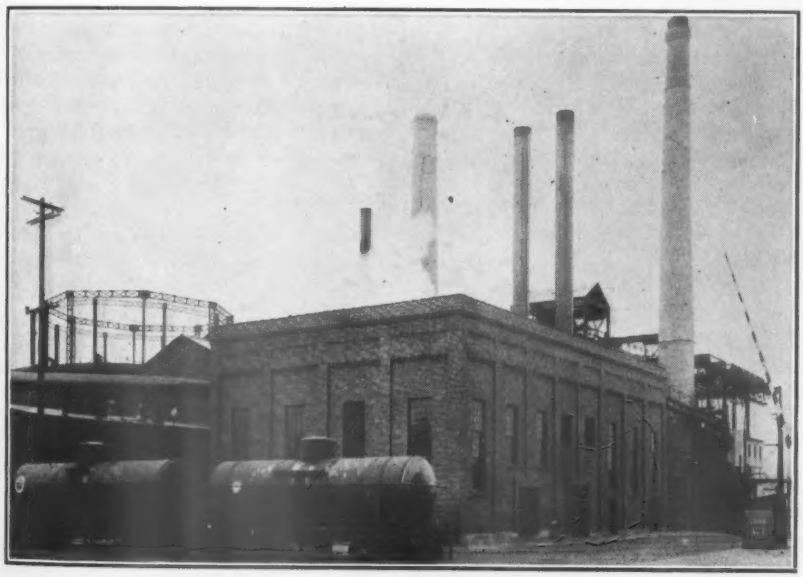
The average daily output of gas at Grand Ledge is only fifteen thousand cubic feet; at Flint, three and one-half million—two hundred thirty times as much.

The amount of coal carbonized per day in Grand Ledge is one and one-half tons; in Flint two hundred tons—one hundred thirty times as much.

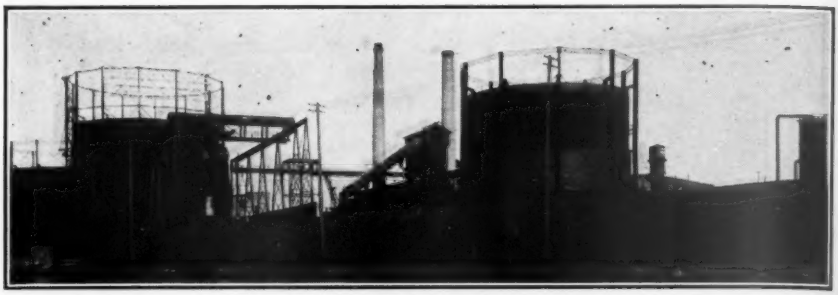
The coke sold per year at Grand Ledge is three hundred tons; in Flint fifteen thousand tons—fifty times as much.

Grand Ledge has six and one-half miles of gas mains; Flint has one hundred ninety-two miles.

Grand Ledge has four hundred gas



The Plant at Flint



Flint Gas Holders

consumers; Flint has nineteen thousand five hundred—forty-nine times as many.

It requires three employees to carry on the gas operations in Grand Ledge, and one hundred eighty in Flint.

The gas holder in Grand Ledge has a capacity of thirty thousand cubic feet; in Flint there are four holders, with a combined capacity of three and one-half million cubic feet, or one hundred seventeen times the capacity of Grand Ledge.

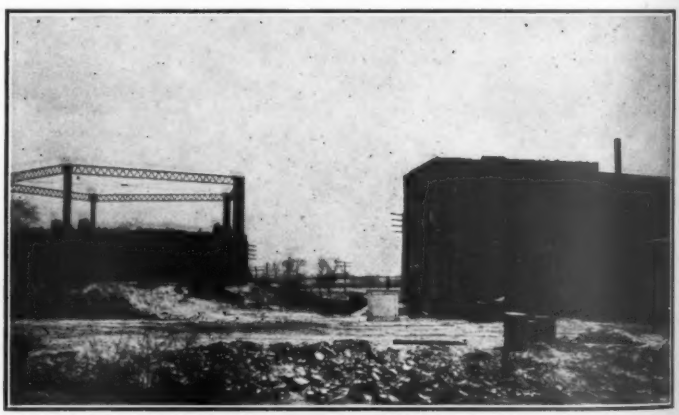
The coal gas process carried on in Grand Ledge and Flint are very much the same, and the type of equipment required is very much the same, the principal difference being in size and amount of labor-saving machinery used. For example, in Grand Ledge there are six retorts, or carbonizing units used, holding three hundred pounds of coal each, whereas in Flint there are forty-eight, holding sixty-five hundred lbs. each. In Grand Ledge a man handles only three-quarters of a ton of coal, and one-half ton of coke per day, and in Flint a man handles ten tons of coal and seven tons of coke per day. In Grand Ledge it is handled with a shovel and in Flint by means of cranes, conveyors, and cars.

The addition of just one man to the operating force in an operation the size of Grand Ledge will increase the cost of gas 25 cents per thousand cubic feet, whereas in Flint the increase would amount to only 1/7 cent per thousand.

Any repair expense, such as the renewal of a small pump, amounting to, say, fifty dollars, would add ten cents per thousand cubic feet to the cost of gas in the month in which the expense was incurred. Such an item of expense could not be noticed in the cost of gas in Flint.

Yes, the man operating a small gas property must be careful and resource-

(Continued on page 360)



The Grand Ledge Plant

Ten McCarter Medals Awarded

Presentation of Medals to Those Who Have Saved Lives by Shaefer Prone Pressure Method

THE McCarter Medal for saving a life has been awarded to ten men in the gas industry who have successfully used the prone pressure method of resuscitation in cases of gas asphyxiation.

Artist's Drawing of McCarter Medal

Those who wear the McCarter Medal form a distinctive group in the gas industry. Theirs is the fraternity of supreme service. Called upon to act quickly and surely, they have given all in their power in order that someone might continue to live.

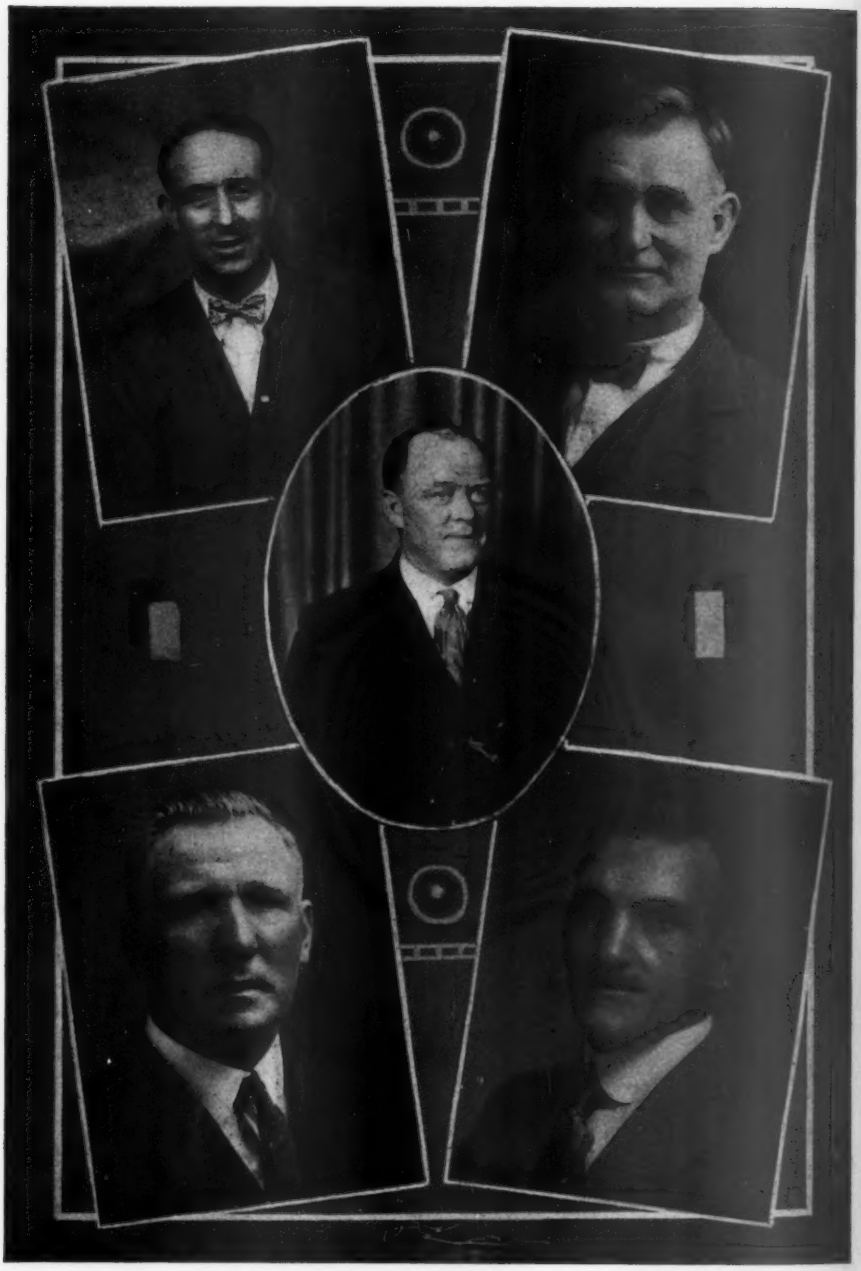
There is a subtle difference between the act of saving a life and one of bravery. The man who does something at the risk of his own life gets his reward in the knowledge that he has risked all. The man who saves a life gives just as much in service to human society, but in a manner that is often less dramatic and less spectacular. To him the McCarter Medal is not only a stimulus to further service, as so many of the awards made for bravery are, but it is recognition that his work has been appreciated.

One of the most gratifying features of the McCarter Medal award is that those who have achieved this high honor are from all walks of the gas industry. Fitters, makers, foremen, and, indeed, men from almost every department make up this small group of men. Regardless of race or creed, the honor that is theirs has been bestowed upon them.

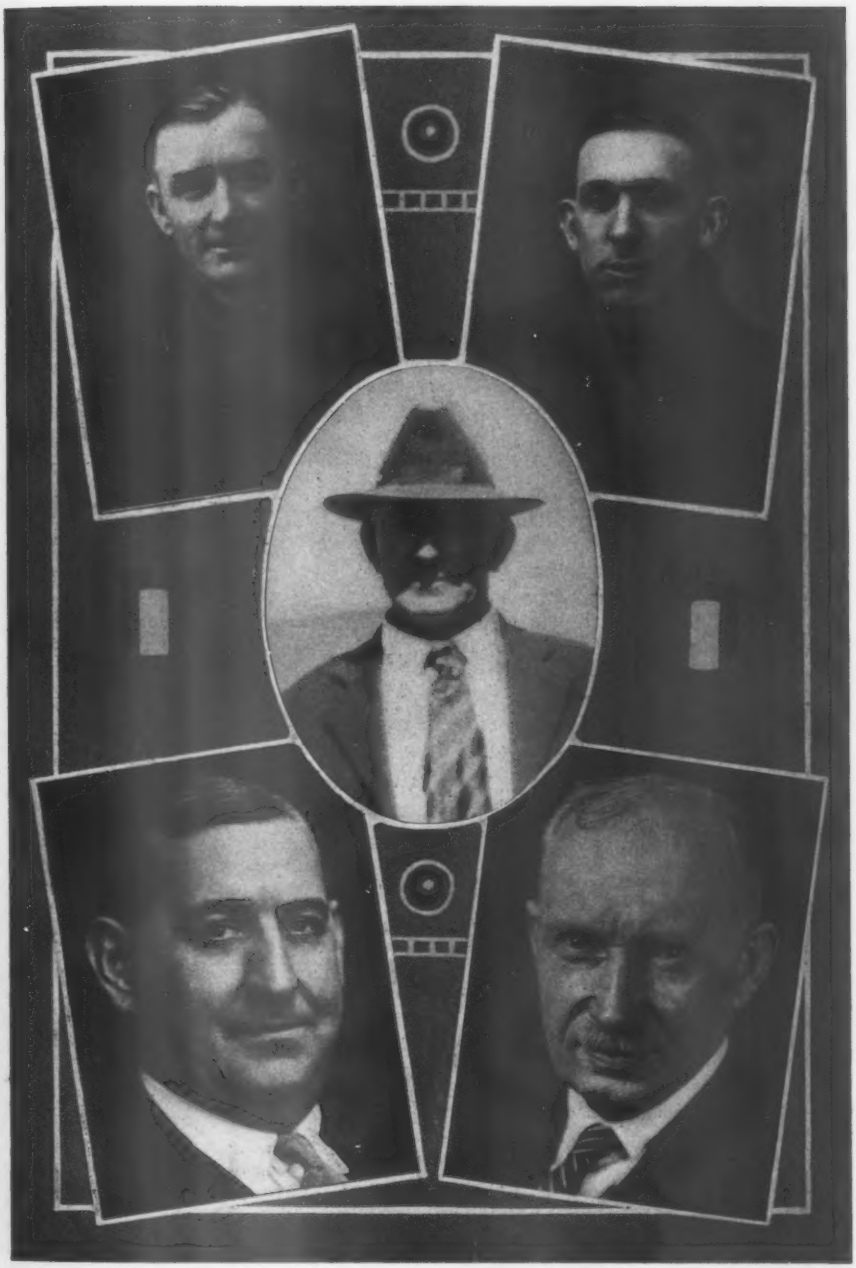
As is often the case, some of the awards are more striking than others. Some men have performed their duty under circumstances that have made the cases more spectacular. However, there should be no discrimination. Each and every man deserves credit for saving a life. Each and every man deserves equal credit for performing a duty well, regardless of whether or not some were asked to act under more trying conditions.

IRA KOCH

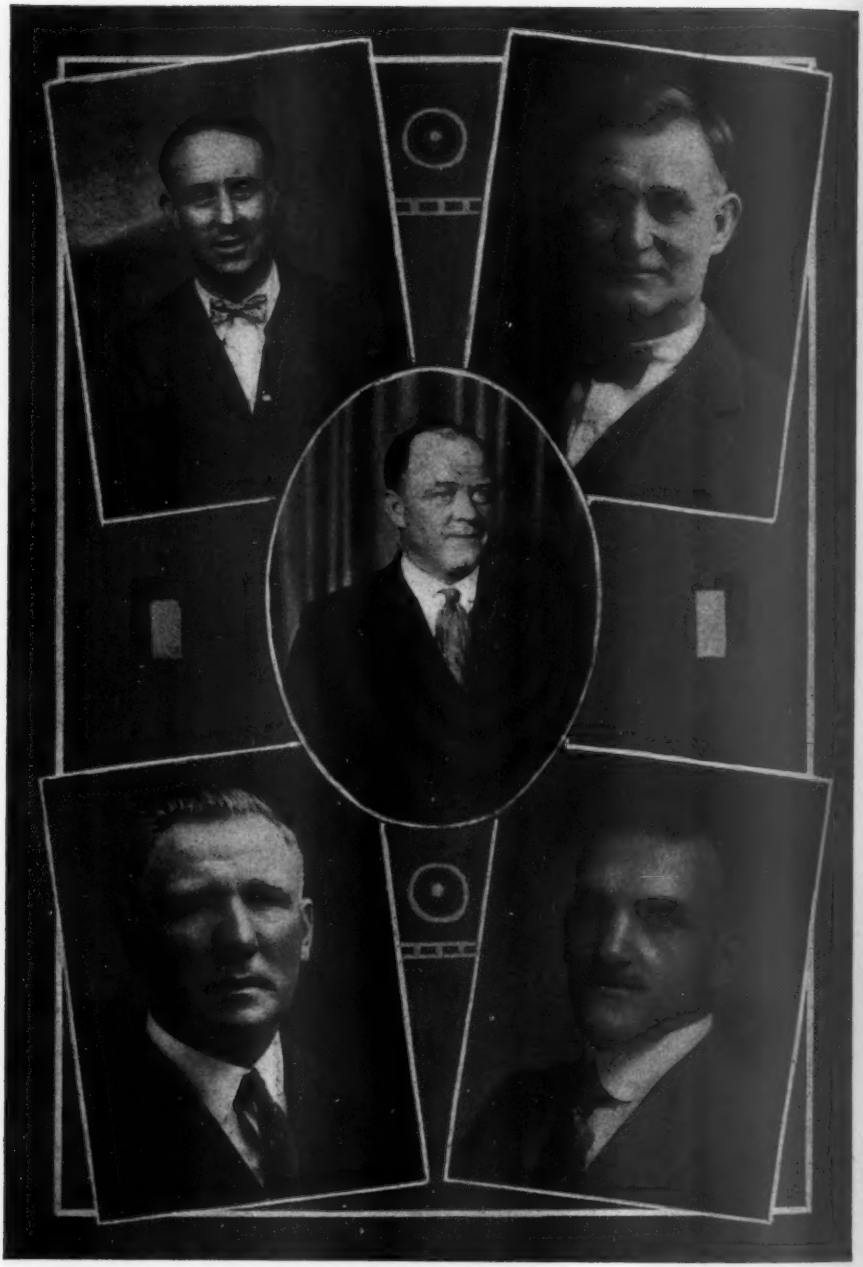
Ira Koch, gas maker, Central Illinois Public Service Company, Taylorville, Ill., has been awarded the McCarter Medal for saving the life of John Painter, gas maker's helper for the same company, who was completely asphyxiated while trying to fix a purifying box which had blown out. Koch had gone home to his evening meal. Koch lived but 200 feet away. Mrs. Koch happened to notice a strong odor of gas when she went to the porch during the meal, and she promptly notified her husband. Koch ran to the plant and found Painter prostrate on the floor. Carrying him to the street, Koch immediately applied the Shaefer prone pressure method, while Mrs. Koch telephoned for assistance. Corrie E. Bethards, superintendent, and Calvin D. Craig, gas engineer, responded and helped in the work of resuscitation.



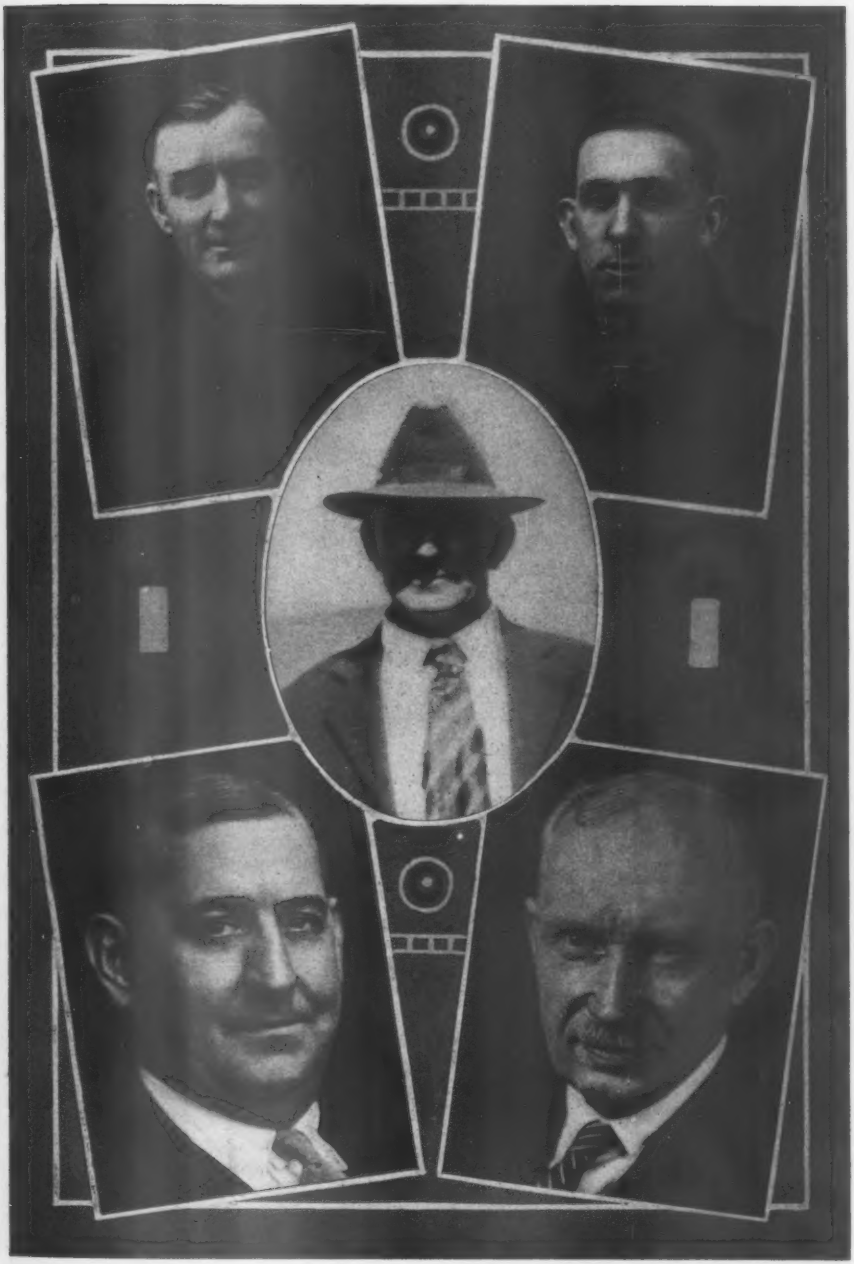
Upper Left, Leon McCarthy. Upper Right, Ira Koch. Center, Michael Cosgrove, Sr. Lower Left, Patrick J. Kerwin. Lower Right, Frank Trembley.



Upper Left, Charles B. Croke. Upper Right, Howard Beardsley. Center, J. A. Miller. Lower Left, Walter M. Gill. Lower Right, William C. Hooper.



Upper Left, Leon McCarthy. Upper Right, Ira Koch. Center, Michael Cosgrove, Sr. Lower Left, Patrick J. Kerwin. Lower Right, Frank Trembley.



Upper Left, Charles B. Croke. Upper Right, Howard Beardsley. Center, J. A. Miller. Lower Left, Walter M. Gill. Lower Right, William C. Hooper.

Twenty-five minutes after Koch first applied artificial respiration, the patient was breathing.

A medal and certificate have been awarded to Koch, and certificates have been awarded to Bethards and Craig.

WALTER W. GILL

Walter W. Gill, an employee of the Consolidated Gas Electric Light and Power Company, Baltimore, Md., saved the life of Gilbert M. Bowen, gas maker for the same company. Bowen and his assistant were cleaning out the wash box of a water gas set at the Spring Gardens Station. Bowen entered the box leaving his assistant to act as a watcher in case of emergency and to help in passing tools in and out. The assistant left the box for some tools, contrary to company orders, and when he returned he found Bowen unconscious inside the box. He immediately summoned assistance. Those who answered were Walter W. Gill, Wallace Grayson and Louis Curry. Grayson and Curry crawled into the box and dragged the victim into the open air. Gill immediately applied the Prone Pressure method and Bowen was pronounced out of danger by one of the company's doctors thirty minutes after. While Gill was working on Bowen, Harry H. Berman, the company's safety engineer, came to the place and relieved Gill.

Grayson and Curry, who dragged Bowen from the box, are not entitled to consideration for the Medal or Certificate, as they did not take a direct part in the application of the prone pressure method. These two colored men, however, are entitled to honorable mention for their act of heroism.

The McCarter Medal and certificate have been awarded to Gill, and the Certificate to Berman.

MICHAEL COSGROVE, SR.

Michael Cosgrove, Sr., blacksmith, Central Illinois Light Company, Peoria, Ill., saved the life of Ralph H. Dawson, mechanic in the water gas plant of the same company. Dawson and three fellow workmen were connecting up a steam line to the water gas washer cooler shell for steaming it out. The pipe was all in and the final connection was being made by Dawson who was standing on the guard over the fly wheel of the exhauster engine about four feet above the ground. The engine was not running at the time. The two men below did not know that the gas valves were leaking slightly and that Dawson was trying to connect a faulty fitting. Dawson suddenly fell lifeless across the head of the exhauster engine. The victim was wrapped in a woolen blanket and carried to the blacksmith shop, where Mike Cosgrove immediately started the application of the prone pressure method.

Cosgrove had seen his company grow step by step to its present size. He had seen fellow-workmen die from gas asphyxiation. In fact, he himself lay unconscious at one time for ten hours while doctors were endeavoring to bring him back to life by every method except prone pressure.

He has been presented with the McCarter Medal and Certificate.

W. G. HOOPER

W. G. Hooper, nightman, The Peoples Gas Light and Coke Company, Chicago, Ill., saved the lives of G. Peterson and Joe Malovitch, structural iron workers, who were found asphyxiated in bed by Mrs. Malovitch. A broken service outside was leaking so badly that the house was filled with gas fumes. Hooper and P. Brucks made temporary repairs to the service to prevent further damage, and then applied the prone pressure method successfully. The McCarter Medal and Certificate have been awarded to Hooper, and the Certificate to Brucks.

JAMES ALBERT MILLER

James Albert Miller, foreman, Pacific Gas and Electric Company, Station Rosa, saved the life of Hugh A. Thompson, laborer, who was cutting off an old one-

(Continued on page 358)

Distribution Conference Held in Cleveland

More Than Two Hundred Attend the Second Annual Meeting; Inspect Appliance Testing Laboratory

ON May 6, 7, and 8 more than two hundred gas company distribution executives and many manufacturers' representatives met in Cleveland, Ohio, for the second annual distribution conference of the Distribution Committee of the American Gas Association. The meetings were held at the Hotel Cleveland.

The extensive program was given full consideration and there was plenty of time for discussion. Full credit should be given to D. A. Powell, New York, N. Y., chairman of the Distribution Committee, for the excellent handling of the program.

"Stoppages, Corrosion and Renewals —Mains and Services," was the subject of the report presented by F. M. Goodwin, Boston, Mass. He brought out the fact that in Boston cast iron pipe is largely used for low pressure distribution and steel and wrought iron pipe for high pressure. Most of the pipe is uncoated. Less than two per cent of the mains in Boston are two inches or under, the minimum size of the mains now installed being six inches. He further said that they had had very little trouble from corrosion.

J. D. von Maur, Toronto, Canada, in discussing this report, called attention to naphthalene stoppages, both those known to be due to napthalene and others attributed to various causes but which are due perhaps to napthalene primarily. Water gas plant operation was blamed for most of the naphthalene trouble. In cases where plant operation is not to blame, or where napthalene troubles are encountered with coal gas, it is necessary to remove the naphthalene by a washing operation, such as the one recently introduced by the Koppers Company. The Cottrell electrical precipitator is said to be of considerable help in eliminating naphthalene from gas.

A. H. Anderson, Detroit, Mich., presented a summary of reports from 32 companies with more than 31,000 miles of mains under the title "Cast Iron vs. Steel Pipe." Sixty-eight per cent of the miles of mains were cast iron, and the remainder steel and wrought iron. In deciding what is the best pipe to use, factors such as ultimate cost, pressures, special construction, electrolysis and soil corrosion must be considered.

In the discussion on this paper it was brought out that wrapped steel pipe is largely used in Cleveland, where it is welded on high pressure systems and screwed on low pressure systems. On the other hand, cast iron is largely used by the Public Service Electric and Gas Company, Newark, N. J. In Indianapolis de Laval cast iron pipe has been used with great success. Mention was made of the use of rubber rings with cast iron pipe.

CORROSION

Prof. D. J. Demorest, in "Notes on Investigation of Pipe Corrosion," mentioned one company that had dug up some 1000 pipes which were brought to the laboratory for test. Each pipe was cleaned and the depth of corrosion measured. By means of correction factors the per cent of the life of the pipe already spent was evaluated.

The fallacy of using ordinary life tables for calculating the life of a distribution system was emphasized. This practice was said to be particularly dangerous when used for determining the present value of mains for rate making purposes.

James Ashworth, Jersey City, told of the various types of protecting material, such as tar paint, pitch coating, paint, galvanizing, asphalt, tar dipped and wrapped in burlap, tar and cement preparations, and others. That most companies favor some form of pipe covering was proved by the results from a questionnaire.

In the discussion of Mr. Ashworth's paper, recess couplings, which have been used successfully by many companies, were discussed. The use and properties of bitumastic enamel were outlined also.

"Distribution Safety Organization," the report by W. E. Kemen, Milwaukee, Wis., caused considerable discussion. Some of the questions brought up concerned turning on the gas before gaining access to a customer's premises, flexible tubing and the use of vent pipes. The new combination ambulance and resuscitation car operated by the Detroit company (a man is on duty 24 hours a day) was described. The fact that most companies require a physical examination of employees, usually with a yearly re-examination, was brought out in the discussion.

Using the 31 answers received to a questionnaire as a base for deduction, W. W. Conklin said that progress was being made in electrolysis mitigation.

M. F. Reeder, in his summary on "Accounting for Mechanical Equipment," said that the question largely rested on whether or not most gas companies have adequate cost figures from which they could determine the efficiency of mechanical equipment and the savings realized. From nine replies to a questionnaire, only one company submitted definite classification of accounts showing costs. Some charged on an hourly rate basis, others on the work done and others on the operator's time. The committee in charge of this work has prepared a classification which they feel will allow the obtaining of definite data in the future.

Out of the 30 companies reporting in regards to "Pumping Main Valves," G. D. Dodd, St. Louis, Missouri, found that 24 were using gate valves and four were using plug valves. Various general valve specifications were given in detail as well as specifications for specific types of valves.

The satisfactory operation of plug valves was discussed. The need for

standards in this work was stressed, not that exact standards could be laid out immediately but that at least a start could be made.

J. D. von Maur, Toronto, told of the results on the questionnaire as to the present use of de Laval pipe. Twelve companies out of 34 reported using this class of pipe. In Toronto it is being used of A. G. A. standard thickness, bell and spigot, cement and lead joints with excellent results.

In "Fitting Shop Practice," by Joseph Lucena, Syracuse, N. Y., several charts were used for illustrating the work. The following answers were received as regards practice in the solicitation of work located beyond the meter.

Solicit fittings in old buildings only.
Rebuilding old lines solicited only.
Sales departments do all the soliciting.
Sell and connect appliances.
Solicit special appliances and industrial equipment only.
Do not solicit.
Salesmen solicit appliance sales and service complaints.
Sales and Home Economic departments solicit.
Sell and connect appliances with ten feet of pipe.
Appliances connected at customer's request.
Connect appliances.
Solicit service complaints and turn in prospects.
Distribution turns in prospects.

In the discussion it was brought out that several companies allow fitters to collect money on the job. The St. Paul company refers any charge above $5.00 to the head of the department. Rochester has men collect only on C. O. D. orders for small staff. The Westchester Lighting Company have their men collect very little and then only when presenting a bill. At Syracuse they bond the men.

The question of handling fitting work showed considerable variance in practice as to whether done on the premises or measured up and the actual work carried out in the shop. In New York City the fitter measures up the work which is cut by the pipe man in the shop and then the appliance and pipe delivered on the job for the fitter to connect. They consider this method much cheaper. At Binghamton, N. Y., the man on the job does the work, as they feel by so doing the customer gets quicker service.

A questionnaire answered by 30 companies showed a variety of practice in piping, venting, flexible tubing, etc., as

(Continued on page 381)

McCarter Medals Awarded

(Continued from page 354)

inch gas service at the main, which was leaking. After the victim became unconscious, a bystander gave improper treatment by putting the victim on his back and pressing his chest rapidly. Miller immediately applied the prone pressure method, and was so successful that the patient was breathing in five minutes. He has been awarded the McCarter Medal and Certificate.

FRANK TREMBLEY

Frank Trembley, gas department, Public Service Electric and Gas Company, Newark, N. J., saved the life of J. Trask, who was asphyxiated while working in his locksmith shop. Trembley was riding in a trolley care when he noticed a woman running from the shop. She frantically waved to the trolley to stop. Trembley, seeing the man on the floor, jumped from the car. He smelled gas and found a hose hanging from an open gas cock. After closing the gas cock he dragged the man into the air. He applied the prone pressure method so successfully that the man was shortly in condition to be turned over to an ambulance doctor.

Trembley has been awarded the McCarter Medal and Certificate.

J. PATRICK KERWIN

J. Patrick Kerwin, gas department, Public Service Electric and Gas Co., New Brunswick, N. J., saved the life of John Totho, laborer, who was overcome while trying to place a stopper in a main. Kerwin successfully applied the prone pressure method.

He has been awarded the McCarter Medal and Certificate.

LEON J. MCCARTHY

Leon McCarthy, gas distribution dept., Public Service Electric and Gas Co., Camden, N. J., saved the life of George Waterson, pipe fitter, same company. McCarthy and Wm. Weaver, Jr., were sent by automobile to a place four miles distant where Water had been asphyxiated while working on a service. McCarthy and Weaver drove the four miles in five minutes. McCarthy applied the prone pressure method successfully. He was assisted by Weaver.

McCarthy has been awarded the McCarter Medal and Certificate. Weaver has been awarded the McCarter Certificate.

HOWARD BEARDSLEY

Howard Beardsley, fitter, United Gas Improvement Company, Philadelphia, Pa., saved the life of Patrick MacTigue, plumber, who evidently fell over the arm of a chair and the gas range at home. Beardsley found two gas burners turned on and unlighted. For an hour and a half he applied the prone pressure method, and succeeded in reviving the victim.

He has been awarded the McCarter Medal and Certificate.

CHARLES B. CROKE

Charles B. Croke, fitter, The United Gas Improvement Company, saved the lives of Mrs. Nellie Nichols and Catherine Evans. Croke found Mrs. Nichols stretched part way across a bed in her bed room. She was entirely unconscious between the second and third stages of asphyxiation. He was successful in applying the prone pressure method.

Croke also was successful in reviving Catherine Evans, a cook, who was found asphyxiated in her kitchen.

Croke has been awarded a McCarter Medal, bar and certificate for two resuscitations. This is the first time the Association has had occasion to make an award to one individual for the saving of two lives.

A Reverie that Covers Fifty Years

Tracing the History of a Company Through the Story of One Man's Service

By GEORGE S. CARLYLE

Mail Department, Consolidated Gas, Electric Light & Power Co., Baltimore, Md.

FIFTY years ago I, a small boy, started to work for the Gas Light Company of Baltimore, then situated on South Street, as an office boy and messenger.

The Gas Light Company was one of two companies in Baltimore furnishing gas as an illuminant at that time, the city being divided into two parts, the western section being supplied by the People's Company, and the eastern section by the Gas Light Company of Baltimore.

FIFTY years ago George S. Carlyle went to work as an office boy for the Gas Light Company of Baltimore. On May 1, 1926, he started his second half-century of public service. The accompanying photograph shows him at his daily work as the group head of the company's mailing department.

The Gas Light Company of Baltimore was the first and original company supplying gas in Baltimore and in fact in this country. It was followed in Baltimore by the People's Gas Company of Baltimore. These companies had the exclusive privilege of furnishing gas to Baltimore consumers until May, 1876, when the Consumers Mutual Gas Light Company of Baltimore City came into existence as a competitor and started the "gas wars" which continued from this period up to the general consolidation of gas and electric companies on June 20, 1906, at which time the present company was formed. The first consolidation was between the Gas Light Company of Baltimore, the People's Gas Company of Baltimore and the Consumer's Mutual Gas Light Company of Baltimore City in July, 1880, forming the Consolidated Gas Company of Baltimore City, then followed by another consolidation with the Equitable Gas Light Company of Baltimore City and the Chesapeake Gas Light Company of Baltimore City in May, 1888.

Gas was used exclusively as an illuminant in Baltimore up to the year 1881 when the Brush Electric Light Company came into existence and installed what were generally known as arc lights in stores, hotels, streets and what few office buildings the city had at that time. This company together with the Edison Electric Illuminating Company of Baltimore City, which was formed by consolidations of smaller companies, were consolidated in May, 1899, forming the United Electric Light and Power Company. The United Electric Light and Power Company and the Wenstrom Electric Company of Baltimore City were then consolidated in February, 1905, forming the Consolidated Gas Electric Light and Power Company, which on June 20, 1906, was consolidated with the Consoli-

dated Gas Company of Baltimore City, forming the present organization.

I have seen things grow in my fifty years of service, first gradually and then with leaps and bounds until the company has reached its present proportions.

For instance, the office that I first went into on South Street had a total of about twenty-five clerks to perform the company's work, all in one room on one floor. The engineering and superintendent's department was on the second floor. We had no outlying stations or shops other than the gas plant at Spring Gardens.

Our meter supplies were kept on the top floor of the South Street building. Meters required for customers were taken from this floor and placed in the residences where needed. Stock for pipe requirements was kept in the cellar of this same building and this pipe was used for meter connections and service introductions from the main. I suppose that probably there were fifty men, all told, engaged in that work. This description will give you some idea as to the development of the Company to the present time, taking into consideration that about seventy-five men performed the clerical work and the laboring work. Of course, this did not include the gas manufacturing at the works. Now compare this with the present organization—with its various shops, outlying stations, pay stations, etc., and you get an idea of the immense growth in fifty years.

I have performed duties in the various departments for the Company from office boy to the general office duties required therein up to the present position which I hold as group head of the mailing department.

To give you some idea as to the growth of the mailing department I, as office boy, used to buy about 100 stamps per day—200 at the most. We probably used one-half or two-thirds of those every day for sending out general mail and notices to customers. All the stamping and sealing was done by hand. At the present time the average number of pieces of outgoing mail is about 3,500.

Likewise in our stationery department —we have a very large room here now in the Lexington Building containing hundreds of stationery necessities and thousands of printed forms of all kinds and sizes. When I started with the Company I used to keep all stationery used, with the exception of possibly a couple of thousand envelopes, in a desk drawer, and it consisted of about a ream of foolscap paper, a ream of legal cap paper, a dozen pencils, a dozen pen holders, a dozen scratch pads, a box of pens, a quart of red and a quart of black ink, and a bottle of mucilage. This about let the stationery supply out.

In my early days gas was used almost exclusively for lighting purposes.

Gas appliances, as now generally used, were unknown.

Gas ranges were a luxury and used by a very few people for the reason that in the first place, the stove or range was very expensive and likewise the gas, which, if I remember correctly, was over $3.00 per thousand.

Domestic water heaters and industrial appliances as now used were unheard of, but of course, time brings changes of all kinds, of all things, to all persons.

I have seen many changes in my time of service both as to offices, executives, and methods in handling the company's business which modern methods have of course reduced labor and costs both to the company and to the consumer.

Small and Large Plant

(Continued from page 350)

ful. He must be a man of many duties, for no job in a small plant is big enough for one man's time and attention. He is very close to every operation; he knows how to do the work himself, and probably does part of it himself. The operating of a small plant is truly a wonderful training for larger responsibilities.

THE TIDE OF MEN AND AFFAIRS

E. H. ROSENQUEST, president of the Bronx, N. Y., Gas and Electric Company, has been elected president of the Westchester Lighting Company, one of the affiliated companies of the Consolidated Gas Company of New York. He succeeds F. A. Stratton, who has been made chairman of the board.

B. W. STILLWELL, for several years vice-president of the Westchester Lighting Company, has been named first vice-president. Edward Prezzano, who has been secretary for the past two years, has been made a vice-president. He has been succeeded by Henry A. Doering, assistant secretary, who has been succeeded by John W. Green.

WILLIAM W. BODINE, who has been vice-president and assistant general manager of the United Gas Improvement Company, Philadelphia, Pa., has been made vice-president and general manager.

THEODORE P. FEDERER, sales manager of the Cohoes Power and Light Corp., Cohoes, N. Y., is now commercial manager of the Adirondack Power and Light Corp., Schenectady, N. Y.

WILLIAM T. BLACKWELL, general lighting representative of the Public Service Electric and Gas Company, Newark, N. J., has been elected a member of the board of directors of the Illuminating Engineering Society for a term of three years.

HERMAN KOCH, JR., advertising manager of the Fall River Gas Works Company, Fall River, Mass., has been made assistant sales manager. He will continue to be advertising manager. John J. Winn, industrial service engineer of the company, has also been made an assistant sales manager and he, too, will retain his former title.

F. C. HOFFMAN, secretary-treasurer, St. Paul Gas Light Company, St. Paul, Minn., is now connected with the Northern States Power Company, St. Paul, Minn.

LAURENCE E. WAGNER, operating engineer, United Gas Improvement Company, Philadelphia, Pa., is now industrial sales engineer for the Providence Gas Company, Providence, R. I.

WILLIAM W. ODELL, fuel engineer, U. S. Bureau of Mines, Minneapolis, Minn., has been transferred to the U. S. Bureau of Mines at 506 Customs House, San Francisco, Calif.

WILLIAM J. LAMBERT, superintendent of gas plant, St. Lawrence Company Utilities, Inc., Potsdam, N. Y., is now plant superintendent and industrial engineer with the Mountain Gas Company, Saranac Lake, N. Y.

EDWARD F. DAVIS, sales engineer, Celite Products Company, New York, N. Y., is now connected with the Drake Non-Clinkering Furnace Black Company, New York, N. Y.

GEORGE F. STEVENS, data engineer, Consolidated Gas Company of New York, N. Y., has joined the staff of the American Gas Products Corporation, New York, N. Y.

HAROLD A. WILLARD, for ten years sales representative for the Vulcan Division of the Standard Gas Equipment Corporation, New York, N. Y., has been transferred to the Oriole Division of the same company. Mr. Willard will travel the territory from North Carolina to Florida, inclusive, including Eastern Tennessee, and Havana, Cuba.

WILLIAM J. WELSH, President and manager of the New York and Richmond Gas Company, has been elected President of the Staten Island Savings Bank by the board of directors of the institution.

LEWIS R. DUTTON, former treasurer and vice-president of the Jenkintown Bank and Trust Company, Jenkintown, Pa., has been made president of the institution.

COMPANY CHANGES

THE DETROIT STOVE WORKS and the Michigan Stove Company are now known as the Detroit-Michigan Stove Company, Detroit, Mich.

THE LINCOLN GAS AND ELECTRIC COMPANY, Lincoln, Neb., has changed its name to the Lincoln Public Service Company.

THE EQUITABLE METER COMPANY, Pittsburgh, Pa., has changed its name to the Equitable Meter and Manufacturing Company.

THE GEO. D. ROPER CORPORATION, Rockford, Ill., has purchased the C. B. Babcock Furnace Company, of San Francisco, Calif., manufacturers of the Babcock furnace.

OPPORTUNITES ABROAD

PITCH AND COAL TAR is wanted for purchase by a firm in Alexandria, Egypt. The agency is also wanted. Accredited American firms can secure further information by referring to Trade Opportunity 20309, Bureau of Foreign and Domestic Commerce.

THE AGENCY FOR RANGES, kettles, boilers, and other equipment for hospitals, cafes, restaurants, and hotels is desired for Munich, Germany. Further information can be had by writing to the Bureau of Foreign and Domestic Commerce, referring to Trade Opportunity 20239.

OUR NEW MEMBERS

GAS COMPANY MEMBERS

The Greenwich Gas Co., Greenwich, Conn.

MANUFACTURER COMPANY MEMBERS

Buckwalter Stove Co., Royersford, Pa.
Excello Mfg. Co. Inc., Providence, R. I.
Drake Non-Clinkering Furnace Block Co., New York, N. Y.
Electrolux Servel Corp., New York, N. Y.

ACTIVE MEMBERS

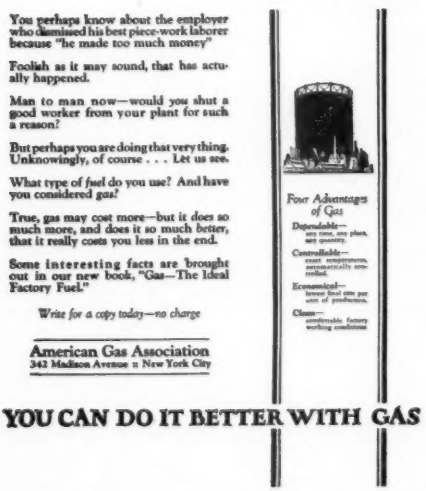
Nealey, James Banton, Surface Combustion Co., New York, N. Y.
Germer, Edward Jr., Germer Stove Co., Erie, Pa.
Nagai Kenkichi, Toho Gas Co., Nagoya, Japan.
Polhemus, Garretson P., P. B. Polhemus Co., New York, N. Y.
White, Lester M., Roessler & Hasslacher Chemical Co., Perth Amboy, New Jersey.
MacLachlan, Thomas G., Westchester Lighting Co., Tarrytown, N. Y.
Eisenberg, Harry, Worcester Gas Light Co., Worcester, Mass.
Van Hook, J. P., The Beckwith Co., Dowagiac, Michigan.
Komiza Shinichi, Kita Kyushu Gas Co., Kokoura City, Japan.
Buchanan, Paul Rutherford, Hartford City Gas Light Co., Hartford, Conn.
Ferguson, James, Worcester Gas Light Co., Worcester, Mass.
Bradley, Justin B., Hornell Gas Light Co., Hornell, N. Y.
Balch, Leland, Lowell Gas Light Co., Lowell, Mass.

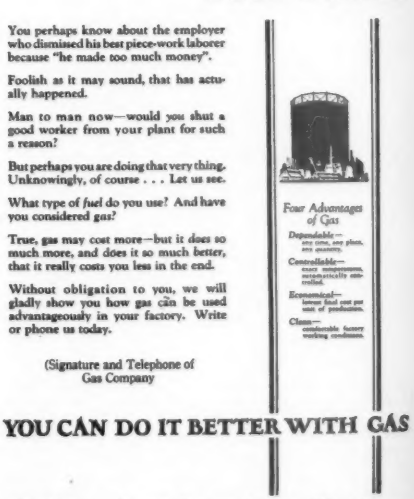
Is This A Poem?

"'Old man! Old man! For whom digg'st thou this grave?
I asked, as I walked along;
For I saw, in the heart of London streets,
A dark and busy throng.
"Twas a strange wild deed! but a wilder wish
Of the parted soul, to lie
'Midst the troubled numbers of living men,
Who would pass him idly by!
"So I said, 'Old man, for whom digg'st thou this grave?'
In the heart of London town?'
And the deep-toned voice of the digger replied—
'We're laying a gas pipe down!'"

THE FOLLOWING was received from the Association's newspaper clipping bureau. The paper credited was the Wilmington, Del., *Journal*.

"The American Gas Association will seek to promote the wider use of gas. We hope they don't get into politics with this."


Your Payroll and Your Profits
You perhaps know about the employer who dismissed his best piece-work laborer because "he made too much money"
Foolish as it may sound, that has actually happened.
Man to man now—would you shut a good worker from your plant for such a reason?
But perhaps you are doing that very thing. Unknowingly, of course . . . Let us see.
What type of fuel do you use? And have you considered gas?
True, gas may cost more—but it does so much more, and does it so much better, that it really costs you less in the end.
Some interesting facts are brought out in our new book, "Gas—The Ideal Factory Fuel."
Write for a copy today—no charge
American Gas Association
342 Madison Avenue :: New York City
Four Advantages of Gas
Dependable—
Controllable—
Economical—
Clean—
YOU CAN DO IT BETTER WITH GAS


Your Payroll and Your Profits
You perhaps know about the employer who dismissed his best piece-work laborer because "he made too much money".
Foolish as it may sound, that has actually happened.
Man to man now—would you shut a good worker from your plant for such a reason?
But perhaps you are doing that very thing. Unknowingly, of course . . . Let us see.
What type of fuel do you use? And have you considered gas?
True, gas may cost more—but it does so much more, and does it so much better, that it really costs you less in the end.
Without obligation to you, we will gladly show you how gas can be used advantageously in your factory. Write or phone us today.
(Signature and Telephone of Gas Company
Four Advantages of Gas
YOU CAN DO IT BETTER WITH GAS

The Industrial Gas Section Is Offering a Mat Service to Local Companies so That They May Tie In With the National Trade Paper Advertising Program Now Being Conducted. The July Mat Is Shown on the Right, and the July Trade Paper Advertisement on the Left. Orders for Mats Should be Sent to Headquarters

Affiliated Association Activities

Harold E. Borton
President, Southwestern Public Service Association

Southwestern Public Service Association

The officers elected for the new year at the thirty-first Annual Convention of this Association held in Galveston, Texas, April 13-16 were: President, Harold E. Borton, vice-president, Mineral Wells Electric Co., Dallas, Texas; first vice-president, chairman electric section, E. H. Kifer, vice pres.-gen. mgr., San Antonio Public Service Company, San Antonio; second vice-president, Chairman Railway Section, W. H. Burke, mgr., Northern Texas Traction Company, Fort Worth; third vice-president, chairman gas section, C. K. Fletcher, secretary-treasurer, Fort Worth Gas Company, Fort Worth; treasurer, F. J. Gannon, Northern Texas Traction Company, Fort Worth; secretary, E. N. Willis, 404 Slaughter Bldg., Dallas. Members of executive committee for two years: J. L. Alexander, mgr., Houston Electric Company, Houston; Alves Dixon, mgr., Baton Rouge Electric Company, Baton Rouge; J. C. Kennedy, vice-president, Central & Southwest Utilities Company, San Antonio; W. B. Tuttle, president, San Antonio Public Service Company, San Antonio; Member Executive Committee for one year: P. E. Nicholls, immediate Past President, vice-president-general manager, Galveston Gas Company.

Illinois Gas Association

The University of Illinois, through the College of Engineering, in co-operation with the Illinois Gas Association, is offering a three weeks' Short Course in Industrial Gas Engineering on June 21 to July 10, 1926. (June 21 to July 3, 1926, at Urbana, July 5 to July 10 will be conducted on the Home Study Plan.) The course consists of lectures, demonstrations, problems and practice in the principles and information necessary to make each student thoroughly acquainted with the application of gas as a fuel. Further information on the course can be secured by addressing either Professor T. E. Layng, Department of Chemistry, University of Illinois, Urbana, Illinois, or A. B. Greenleaf, 325 Peoples Gas Building, Chicago.

Wisconsin Utilities Association

This Association recently conducted, through the medium of its publication, a meetingless convention. A year ago the policy of holding conventions for each of its sections and no meeting for the Association as a whole was adopted. This plan has proved such a success that its continuance is assured. The total attendance at the sectional meetings held during the year was 675 who listened to papers and discusssions of only subjects vitally interesting to them. The general reports printed in the Association's publication indicate that the past year under the able guidance of President George H. Wilmarth and executive secretary John N. Cadby has been a most successful one. The officers elected by mail ballot for the new year are: President, John St. John of Madison; vice-president, John Anderson of Milwaukee; treasurer, G. C. Neff of Madison; executive secretary, John N. Cadby; and chairman of public relations section, C. R. Phenecie of Green Bay.

Over 170 members were registered at the annual meeting of the gas section of this Association held May 13 and 14, at the Hotel Retlaw, Fond du Lac, Wisconsin. A very interesting program had been arranged by the committee in charge.

Among the papers that were presented were the following:—"Gummy Deposits in Mains and Meters"—George E. Wagner, Madison Gas and Electric Company. "Sales, A National Problem"—R. J. Canniff, Chairman Commercial Section, American Gas Association. "The Work of the Technical Section—American Gas Association"—L. J. Willien, Byllesby Engineering and Management Corporation. "Industrial Gas Problems and Progress"—G. H. Head, Wisconsin Gas and Electric Company. "Recent Developments in the Gas Business"—Lewis Stein, Northern

States Power Company. "Application of Gas to Railroad Shops"—Fred W. Hainer, Wisconsin Power and Light Company.

Gas Sales Association of New England

The annual meeting of the Gas Sales Division of the New England Gas Association was held on May 7. The newly elected officers are:

M. B. Webber, Governor; J. H. Sumner, Secretary-Treasurer, and the following men elected to the Board of Managers—Howard B. Hall, J. L. Johnson, and S. B. Palmer, besides the two remaining on the Board, J. H. McPherson and W. K. Stafford. The meeting was partly business and partly social.

The retiring Governor, J. J. Quinn, was presented with a case containing a handsome gold pen and pencil.

The speakers of the evening were William Gould, M. B. Webber, F. C. Freeman, President of the New England Gas Association; Nils T. Sellman of the New York Consolidated, and Chas. R. Weir.

The report of the secretary-treasurer showed the finances to be in a very healthy condition, and that the Division now has 204 members and has gone through this year with an average membership attendance at meetings of 69½ per cent.

Notices were given at the meeting of the proposed Regional Conference to be held at Gloucester; of the Industrial Gas Class at M. I. T., and of the two-day convention to be held by the Operating Division at the New Ocean House at Swampscott.

Missouri Association of Public Utilities

This Association held its annual meeting at Springfield, Mo., May 3, 4, and 5. An excellent program had been arranged by those in charge.

The new officers are: President, F. S. Dewey, Kansas City, Mo.; first vice-president, W. H. Henby, University City, Mo.; second vice-president, O. W. Mattison; third vice-president, A. E. Reynolds, and F. D. Beardsley, secretary-treasurer.

Michigan Gas Association

The program for the Annual Convention of this Association to be held June 24, 25 and 26 at the Grand Hotel, Mackinac Island, Mich., remains substantially as announced in the April number of the A. G. A. Monthly. It is a splendid program, all items being on timely subjects and to be handled by men of national reputation. The facilities available at Mackinac Island and the beautiful surrounding scenery make it possible to provide delightful entertainment features and everything is being done by the Entertainment Committee to take advantage of these conditions. Special efforts are being made for entertaining the ladies so that the Committee is very hopeful of having a large number in attendance.

Canadian Gas Association.

Secretary G. W. Allen promises that every effort is being made to make the 19th Annual Convention to be held in Montreal, Thursday and Friday, July 8 and 9, 1926, the best meeting ever held by the Canadian Gas Association. He says, "the program is full of good things." The Mount Royal Hotel will be the convention headquarters in Montreal and reservations should be made direct and early. Boat trips to and from Montreal are being arranged and information concerning them can be secured from G. W. Allen, 7 Astley Avenue, Toronto 5, Ontario.

Empire State Gas and Electric Association

The annual meeting of the Commercial Section of this Association will be held in the Black River Valley Club at Watertown, N. Y., on Thursday and Friday, June 24 and 25, 1926. The Chairman of the Section, R. V. Howes of the Consolidated Gas Company of New York, will preside.

The program offers a number of most interesting subjects to be handled by authorities. Among these papers are "Some Thoughts on Advertising," by A. W. Humm, advertising manager of the Standard Gas Equipment Corporation; "Home Service," by Miss E. M. Rischman of the Buffalo General Electric Company; "Selling to Keep Sold," by Cyrus Barnes, general sales manager of the Charles H. Tenney Co., Boston; "Window Displays," by R. M. Martin, director of window display, Consolidated Gas Company of New York; "Rural Business," by John Haley, vice-president of the Adirondack Power and Light Corporation, Schenectady, N. Y.; "Building the Completely Equipped Gas-Electric Home," by G. I. Vincent, general manager of the Syracuse Lighting Company; and "Public Relations," by M. S. Sloan, president of the Brooklyn Edison Company. Judging from this program, there should be a good attendance at this meeting.

Louis N. Yetter
President, New Jersey Gas Association

Frank Edge
President, Midwest Gas Association

Courses at U. of Michigan

A RECENT publication of the University of Michigan describes the Chemical Engineering and Graduate Courses in General Chemical Engineering, Metallurgical Engineering, Gas Engineering and Organic Chemical Industries offered by that Institution. Copies of this bulletin can be secured by addressing W. L. Badger, Professor of Chemical Engineering, University of Michigan, Ann Arbor, Michigan.

REGARDING REPRINTS

ONCE AGAIN we wish to remind our contributors and readers that reprints of any material published in the American Gas Association MONTHLY may be obtained in accordance with the following scale:

100 copies, 1 page	$2.00
Additional 100's	.40
100 copies, 2 pages	3.00
Additional 100's	.40
100 copies, 4 pages	7.00
Additional 100's	.75
100 copies, 8 pages	10.75
Additional 100's	1.05

These copies cover only actual printing costs. Reprints can be made according to this scale only if orders are received while material is still in type. Prompt action is, therefore, essential. Under any circumstances, permission of the author must be obtained before reprints can be made.

Woman's Service Club

THE first Annual meeting of the Woman's Service Club of the Consolidated Gas Company of New York and Affiliated Companies, was held Monday, May 10th, at 130 East 15th Street, at which time the following board of managers were elected. This board is chosen so that each company in the affiliated gas system will have representation.

Mary Marshall, representing East River Gas Co.
Grace Cron, representing New Amsterdam Gas Co.
Fernande Bergin representing N. Y. & Queens Gas Co.
Charlotte Maurer, representing Central Union Gas Co.
Mildred Kriegle, representing Consolidated District Office No. 6.
Elizabeth Day, representing Consolidated District Office No. 5.
Mary Sayres, representing Consolidated General Office.
Ethel A. Conklin, President, representing Consolidated District Office No. 2.
Nellie B. Seymour, 1st vice-president, representing Northern Union.
Grace E. Larson, 2nd vice-president, representing Bronx Gas Co.
Bertha E. Dutcher, Treasurer, representing Mutual Aid Society.
Bessie E. Dimes, Secretary, representing Standard Gas Light Co.
Elizabeth M. Marlowe, Consolidated Gas Company Representative.

The club was organized August 3, 1925 for the purpose of promoting social and athletic activities, fostering good fellowship, loyalty, co-operation and a broader understanding among women employees.

There are 524 women in the Affiliated System Gas Companies of whom 348 are members of the club. Efforts are being made to obtain 100 per cent membership before the year is up.

Various athletic activities have been organized, such as golf, tennis, bowling, swimming, gymnastics, horseback riding, etc., and men employees have been accorded the privilege of participating. The program outlined by the club is most interesting and covers study courses as well as many more activities to be engaged in in the fall.

INDUSTRIAL GAS BOOKS FOR SALE

THE ASSOCIATION now has for disposal a complete series of industrial gas books. They are:

Bakeries, Hotels and Restaurants
Combustion
Food Products
House-Heating
Industrial Data Sheets

The price of the books is $1.50 a copy to A. G. A. members, with the exception of the Industrial Data Sheets which are seventy-five cents a set. Special prices can be quoted on lots of thirty or more.

The Ceramic Industry

(Continued from page 334)

the burn and the weight of ware produced.

Vitreous enameling furnaces have a desirable gas load. They generally operate 24 hours a day, six days a week. On such a furnace, five feet wide by 12 feet deep, the maximum hourly demand is about 2,000 cu. ft., with a monthly gas consumption of 1,000,000 to 1,200,000 cu. ft.

Enamel smelters produce beautiful enamel when fired with clean city gas. A rotary enamel smelter, with a capacity of 750 pounds of enamel per charge and melting a charge in one to two hours, has a maximum demand of about 5,000 cu. ft. of gas per hour. They usually operate about 300 hours a month, although some are operated 24 hours a day and 600 to 700 hours a month. The monthly gas consumption averages from 1,000,000 to 2,000,000 cu. ft., depending on the output of enamel.

Common brick are usually burned in a temporary kiln by the periodic process. The gas consumption varies with the kind of clay. Some clays can be burned with as low as 2,000 cu. ft. of gas per 1,000 brick; other clays, containing more flint and less carbonaceous matter, take as high as 5,000 cu. ft. of gas per 1,000 brick. On a kiln of 30 arches, containing 1,200,000 brick, the maximum hourly gas consumption is about 90,000 cu. ft. per hour if all arches are fired at once and about 25,000 cu. ft. per hour if fired in rotation: that is, having not more than five arches under maximum fire at one time. It takes from 20 to 50 hours to burn an arch, depending on the kind of clay, and from 20 to 120 hours to burn a kiln of 300 arches, depending on the system used.

The monthly gas consumption in a plant making common brick will run between 2,000,000 and 10,000,000 cu. ft. of gas, depending on the capacity of the plant and the nature of the clay. In the more northern climates, like Chicago, it is about half of this in the winter months, due to less building activity and the small demand for brick. Some brick plants shut down completely for about four months in the winter on account of frost in the clay and unfavorable drying conditions. Thus, brick burning is an ideal load for balancing the house heating load or for filling in the summer "valley" which exists in most gas companies' sales.

There is hardly a ceramic industry but what could use at least 1,000,000 cu. ft. of gas per month. Some would use as high as 100,000,000 cu. ft. a month. But let us consider the smallest figure for a moment. To get 1,000,000 cu. ft. a month of domestic consumption would mean taking on 400 new customers with an investment of around $120,000 for gas plant, mains, services, meters and appliances, of which the gas company would have to spend $80,000 for equipment to deliver the gas and the customers would have to spend $40,000 for appliances to use the gas. After we had served these 400 customers for a year, sent them 4800 bills, answered 500 service calls, etc., we would find that 70 per cent of them were being served at less than cost and the other 30 per cent were carrying the loss.

On the other hand, under average conditions, just one customer, a 1,000,000 cu. ft. per month industrial customer, can be taken on with an investment of less than $40,000 for plant, mains, service and meters. The customer's investment to use the gas may run anywhere from $2,000 for a rotary smelter to $10,000 for an enameling furnace, or perhaps to $50,000 for a continuous furnace. A tunnel kiln costs around $250,000 complete. The ceramic customer's investment is so high for new kiln, building, etc., that he is glad to save the investment of a gas plant, and here is the gas mans' opportunity to serve the ceramic plant, and at the same time get more wholesale gas business, thereby increasing his output, raising the efficiency of his plant, stabilizing his business and increasing his profits.

The Trend of Accident Prevention

By M. I. Mix

Assistant General Superintendent, Distribution Dept., The Peoples Gas Light & Coke Co.

THE gas utility happens to be one of the oldest of the public service industries, and likewise has the distinction of being one of the earliest in organizing its accident prevention work. Cooperative accident prevention effort was instigated in the gas industry in 1913 through its central organization which was then known as the American Gas Institute. During this same year the National Safety Council was organized to carry the safety crusade through the entire industrial world.

With the realization of the need for concentrated safety action in the manufactured gas industry, an accident prevention committee was formed of some of the foremost workers in the various member gas companies of the American Gas Institute to work our safety standards for preventing accidents in gas undertakings. The gas field, like a great many other industries at that time, was particularly disposed to large improvements in safety work, as it always employed, as it does today, a great number of the lowest skilled laborers. Before the General Compensation Law went into effect, accidents were looked upon as a necessary evil. Labor turnover was large and an injury usually meant replacement by another employee. Accident statistics were not even thought of, at that time, and any means taken to prevent accidents, however meager, were able to make a remarkable showing.

"Realization of the weakness is often the winning of half the battle," provided steps are immediately taken to correct improper conditions. This proved to be true in the gas industry. The careful analyses of occupational hazards of the gas industry and the designation of proper methods to overcome these accidents have been the chief means of combating careless and thoughtless practices so common in a great many of the large industries.

The analyzing of statistics and the classifying of accidents to determine the responsibility—whether the fault lies with the management in not properly instructing the workmen and in not providing proper equipment, or, on the other hand, whether the fault be with the workmen in not following instructions and in carelessness—is one of the first tools for good accident prevention work. The analyzing of the cause of each accident through proper and immediate investigation throws enlightenment upon conditions that can be corrected, and future accidents of similar kinds can be prevented. A standard classification of accidents further provides inter-comparisons, not only by the interdepartments of a large company, but also between outside companies, and results in elimination of accidents through keen competition.

Education of employees along lines of their work to avert accidents is a well recognized method and shows wonderful results. It has been practiced to the fullest extent in the gas industry.

The use of bulletins, picturing accidents and safety measures, to permit the

Prepared for the "Monthly" by the Public Utilities Section of the National Safety Council.

visualization of occupational hazards is commended and I believe there are few gas plants that do not take advantage of the bulletins sent out by the National Safety Council, characterizing hazardous conditions found commonly in every industry. These bulletins are sent directly to the superintendent, who carefully checks over his plant to see that the conditions portrayed are not to be found in his plant, after which they are posted on a bulletin board for general information and to call the working men's attention to conditions that they should not permit to exist for their own safety.

In properly conducted safety meetings each accident of recent occurrence is discussed thoroughly and suggestions made as to how it could have been prevented. It has been found very beneficial to have the victim of an accident present at these meetings to explain the precise reason for his accident. Very often this takes the place of discipline for carelessness and insures that the accident will not be repeated the second time, if it is at all preventable, by giving it proper attention and publicity. If a man has to appear before this committee very often, it points him out as either a very unfortunate or careless workman. Steps may then be taken to relocate him in a position where he is better suited to his ability or to provide for his dismissal if he is an irresponsible employee.

Very often a gas company sees fit to offer rewards for suggestions giving particular attention to safety work. This adds an incentive to the workmen, not only from the lucrative end but also from the publicity it gives to the employee in the eyes of the management.

The periodical changing of the complete safety organization is a means used to bring forth new ideas as well as to let all employees have an insight into the workings of the safety committee and thus keep enthusiastic interest up.

A great many standard safety devices are brought to the attention of all industries of the present day, and instead of having each company make its individual investigation, sometimes at considerable expense both in money and accident experience, these devices are referred to the safety committee of the central organization and tried out.

In addition to the occupational hazards due to the production and distribution of gas there are some hazards due to its utilization, if improperly used. Accident prevention in the gas industry has entered this field of analyzing utilization conditions with the idea of making suggestions in order that accidents due to faulty installation of gas appliances or equipment be eliminated by the proper education of the public. In this connection the Accident Prevention Committee of the American Gas Association has cooperated with the National Safety Council and the Public Health Service of Washington in calling the public attention to certain dangerous practices.

While the preceding discussion only mentions a few of the major points to which may be attributed the success of safety work in the gas industry, the statistics which have been kept in recent years show that safety efforts are continually being rewarded by the diminution of accidents. The figures, as compiled, not only show a smaller number of accidents each year, but it is very gratifying to realize that with the continued safety stimulation the very minor accidents are also being reported whereas in the first years of accident prevention work it was only the major accidents which were reported. For this reason it is figured that the accidents have at least been cut down to less than one-half the proportion as shown by the figures.

As to the future of accident prevention in the gas industry: It can only be forecast from the past record. It is felt that accident prevention work will continue to reap the benefits of past efforts and that a still greater decrease in accidents will be accomplished in the years to come. With the better working conditions and the improved facilities for doing work by mechanical means, accidents should naturally be decreased.

ACCOUNTING SECTION
DEWITT CLINTON, Chairman ALBERT L. TOSSELL, Vice-Chairman
H. W. HARTMAN, Secretary

The District Service Representative Plan

Detailed Operation of the Plan as It Has Been Worked Out Successfully by One Company

By H. M. PACE
Asst. to Vice Pres. and Mgr., Charleston Consolidated Railway and Lighting Co., Charleston, S. C.

IN the past year our company has made several changes in the accounting department. These changes have not only simplified the routine of the department, but have also improved the morale of its personnel and the relations between the company and its consumers. The most interesting change is undoubtedly the substitution of district representatives for old-time meter readers and collectors.

Formerly it was our practice to shift our meter readers from district to district every month. We found that this caused some of our customers to question the ability and accuracy of the men. We also had a collector for each of our five large districts.

Under the new plan the city is divided into nine districts. Each district is in charge of a faithful employee, who reads the meters, delivers the bills, collects accounts, attends to minor complaints about the service and investigates high bill complaints. These men have become acquainted with a large number of the customers in their districts, and are utilizing every opportunity to "sell" service. They have been making a diligent effort to show those with whom they come in contact just where the service goes, and that the size of the bill is controlled by the householder or his agents. In many instances they have been able to show the customer right on the spot how the service was being wasted. They have done some very excellent work toward dispelling the mystery surrounding the meter by teaching customers how to read the dials. Being personally acquainted

Form A-27

GAS		CHAS. CONSOL. RWY. & LTG. CO.				ELECTRIC	
1925	Gas Index	1926	Gas Index	1925	Elec. Index	1926	Elec. Index
Dec.		Dec.		Dec.		Dec.	
Nov.		Nov.		Nov.		Nov.	
Oct.		Oct.		Oct.		Oct.	
Sept.		Sept.		Sept.		Sept.	
Aug.		Aug.		Aug.		Aug.	
July		July		July		July	
June		June		June		June	
May		May		May		May	
Apr.		Apr.		Apr		Apr.	
Mar.		Mar.		Mar.		Mar.	
Feb.		Feb.		Feb.		Feb.	
Jan.		Jan.		Jan.		Jan.	
1925	GAS	1926	GAS	1925	ELECTRIC	1926	ELECTRIC
Trans. Index				Trans. Index			

Gas	Number	Size	Set	Rem.	Electric	Number	Con.	Size	Set	Rem.

T. On Gas	T. Off Gas	T. On Elec.	T. Off Elec.

New Form for Recording Meter Indices in the Route Book

with a large proportion of the consumers in their districts, they handle effectively the chronic complainers, with whose pet grievances and individual idiosyncracies they have grown familiar through frequent contact.

They have also made a very remarkable record in collections. By having the same customers to deal with constantly they are able to keep the delinquents down to the lowest possible number, as the customer soon finds he cannot impose on the representative who knows him well enough to see through a flimsy excuse, but insists upon a good reason for

not paying accounts on time. For the past four months not a single delinquent account could be held against the representative of any district.

Having to cover the same territory constantly, the representatives become well acquainted with the street numbers, the location of gas and electric meters on the different premises, and many other details of the work of their respective routes. This knowledge enables them to render a greater service in a given length of time and to render it with greater ease.

Moreover, the representative will take pride in doing his work well, because he feels that the responsibility of keeping his individual route in good shape is entirely up to him, and that he will have no one else to blame for slighted work or for any errors that may be made. Every man likes to feel that he is responsible for something—that he is more than a mere cog in the wheel. Therefore, to be assigned a route and made responsible for all the work done in it appeals to the pride, and makes the worker a better employee. Consequently, he is of greater value to his employer.

The district service representatives are directly under a supervisor, who goes from one district to another to see that the work is being performed properly.

For the guidance of these men we have a set of general instructions pointing out the type of service we want our employees to render. We also talk with them, individually and in groups, and issue weekly bulletins dealing with accuracy, courtesy, fair dealing, conduct, complaints, and other pertinent subjects, all of which serve as effective reminders of the work to be accomplished and the value of good will.

Our system of recording meter indices in the meter route book was cumbersome. Our district service representatives were asked to study the situation and recommend a new form. The result was the form shown. It will be noted that the name and address (printed with the addressograph) and other important data are shown at the bottom of the sheet, an arrangement which has proven most satisfactory, as it is much easier to find the address wanted than it would be if the address were printed at the top. This combination gas and electric sheet reduced the total number to be handled each month as follows:

Dist. Service Rep.	8,000
Bill clerks	8,000
Ledger clerks	8,000
at total of	24,000 or
	288,000 annually.

not considering the time formerly lost turning over a large number of sheets to enter, connect and disconnect records.

Spurt Marks Close of Architectural Competition

THE exact number of entries in the A. G. A. architectural competition is not known as this issue of the MONTHLY goes to press, but there have been over 230 packages containing drawings received. As some of these packages contain more than one entry, and as there are a number of competitors' drawings on the way by express, the total will run up to 275. This is an unusual number of entries in a competition of this kind and indicates the interest architects and draftsmen have taken in the subject of gas in the home.

The ballots for judges (two of whom were to be elected by vote of competitors) have been counted and the two leading architects, who have consented to serve, are: Aymar Embury, II, and Dwight James Baum, both widely known men. These men will judge the drawings from an architectural standpoint and the third judge, representing the A. G. A., will check the suitability of the design from the standpoint of gas equipment as well as other features. Alexander Forward, Secretary-manager of the A. G. A., will serve in this capacity.

The Advertising Value of a New Building

New United Light and Power Headquarters Building at Davenport, Ia., Opened with Public Reception

THE public opening of the United Light building, operating headquarters of the United Light and Power Company and of local service companies, in Davenport, Iowa, took place on April 15 and 16. Capitalizing every element of the event, the company succeeded in getting a message across to the public that could not have been done as well by using some other method.

The New Building of the United Light and Power Company

When Mr. and Mrs. John Smith build a new home, everyone is pleased. The community benefits from the pretty addition; it is a real improvement. The friends of Mr. and Mrs. Smith take pride in knowing that the Smiths can afford to build their own home. All in all, the event is a welcome one.

The same applies to the opening of a new public utility building. The community is glad to see a building erected that will add to the beauty of the city. In addition to reflecting credit on the company, a large, imposing building adds to a city's welfare for the entire community. The Woolworth Building does not have any five and ten cent stores in it, but in everyone's mind it represents that chain of stores. The Woolworth Building adds to the beauty of downtown New York, and it also adds greatly to New York City as a whole, because the Woolworth Building is a tradition — it builds good will for the five and ten cent stores.

Of course the same analogy applies in Davenport, Ia. The public welcomes the erection of a new office building, especially one that adds to the beauty and appearance of the city. The new building cost in the neighborhood of five hundred thousand dollars. Davenport citizens look with pride upon it as being the most modern building. They look with pride upon the utility for furnishing such a building.

A building large enough for the requirements of the financing, operating, engineering, and executive staff has made a fine addition. Provision has been made for offices and sales floors facilities for the local service companies. By building these facilities as a part of the headquarters building, it was possible to provide better facilities than are found usually in a city the size of Davenport.

The opening of the building was more than a formality. A booklet was prepared for the visitors. This gave a historical story of Davenport and of the company. Personal sketches of the executives were included. One of the most interesting parts of the book is the

The Chemical Laboratory in the New Building

chapter entitled "A Journey Through the Building," in which the author takes the visitor and leads him to every part of the new office building. Anyone with the book in his hand could go through the building and gain a comprehensive idea of the workings of the company. They would see the precautions taken in the accounting department to check against inaccurate bills. They would see the great amount of work necessary to give them public utility service.

A chemical laboratory has been installed in the new building for the purpose of carrying on research and analytical work for all of the properties of the United Light & Power Company.

The regular analytical work will consist of testing the large quantities of coal and coke used by the gas and electric plants, the conditioning of water used in the boilers for the production of steam, the testing of oils used for the enrichment of illuminating gas, lubrication and hydraulic purposes, purifying materials used for removing the sulphur compounds from illuminating gas, and the various materials purchased regularly for general use at the various plants.

The research work will consist of work on oils and coal used in the production of gas, with a view of greater efficiency and greater economy; work on the various kinds of fire clay, fire brick and insulating material used in water gas sets and boiler furnaces; paints for the varied uses and conditions under which they are to be used, etc.

How Old Is Safety?

THAT safety was strictly practised in ancient times and that penalties for non-compliance with safety laws were carried out, is shown by the following extract from the laws of King Hammurabi of Babylon, who died in the year 2185 B.C.:

"If a builder build a house for a man and do not make its construction firm, that builder shall be put to death."

The great sage and moralist, Confucius, who died in 478 B.C., gave the following bit of safety advice:

"The cautious seldom err."

Turn to your Bible in the book of Deuteronomy, 22nd Chapter, eighth verse, and read:—"When thou buildest a new house, then thou shalt make a battlement for thy roof, that thou bring not blood upon thine house, if any man fall from thence."

King Solomon, of Israel, gave the following wisdom which is found in the third chapter of Proverbs, verses 21 and 23:—"Keep sound wisdom and discretion—then shall thou walk in thy way safely and thy foot shall not stumble."

MANUFACTURERS SECTION
WATSON E. DERWENT, Chairman W. E. STEINWEDELL, Vice-Chairman
C. W. BERGHORN, Secretary

Annual "Style Show" To Be "Bigger and Better"

Exhibition Committee Plans for 1926 Convention; Space Reservations Already Being Received

TO steal a parlance from *Vogue*, the annual style show of the American Gas Association will be bigger and better in 1926 than ever before. The announcement that the convention will be held on the Million Dollar Pier was favorably received by everyone. It was especially welcomed by the Exhibition Committee and those who plan to exhibit.

All who attended the 1925 convention remember the crowded appearance of the hall and the demands for space that could not be arranged for. This year, due to a combination of circumstances, the Exhibition Committee has at its disposal the facilities for an exhibition under extremely favorable circumstances.

From year to year there has been a natural growth in the amount of space sold and in the number of exhibitors at A. G. A. conventions. This growth has been steady and regular, as was proved by the figures given in the May issue of the MONTHLY. The result was that this year's committee was faced with the problem of providing more space for the exhibition, a problem that was only solved when it was decided to lease the Million Dollar Pier rather than any other pier at Atlantic City.

Because of this change, the committee can now assure every exhibitor that the provisions for this year are much better than those in past years. Not only is more space available than in 1925, but the space will be sold at a price considerably lower per average square foot than last year. The number of booths arranged for is approximately the same. However, reference to the skeleton drawing and layout of the Million Dollar Pier brings out the fact that the average size of the booths is larger than in 1925.

The prospectus was mailed to reach the exhibitors about May 17. Already 70 per cent of the space has been reserved. As in past years, the allotment of space will be made in the order in which the applications are received. Notice of allotment will be sent to the applicant just as soon as all arrangements are made. The Committee is retaining the right to make any adjustments of space provisions in order to protect the best interests of the Exhibition.

Special announcements of developments and plans will be made at intervals during the summer.

Exhibition Space 1926 Convention

THE following companies have applied for space at the annual convention up to the time of going to press, May 25:

Lovekin Water Heater Company, Philadelphia, Pa.

Roberts and Mander Stove Co., Philadelphia, Pa.

Robertshaw Thermostat Co., Youngwood, Pa.

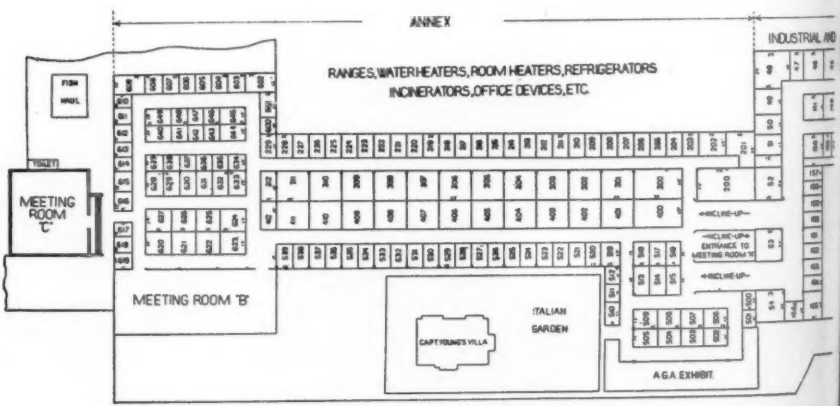
Ruud Manufacturing Co., Pittsburgh, Pa.

Standard Gas Equipment Corp.
Acorn Division, Aurora, Ill.
Oriole Division, Baltimore, Md.
Triplex Division, New York, N. Y.
Vulcan Division, New York, N. Y.

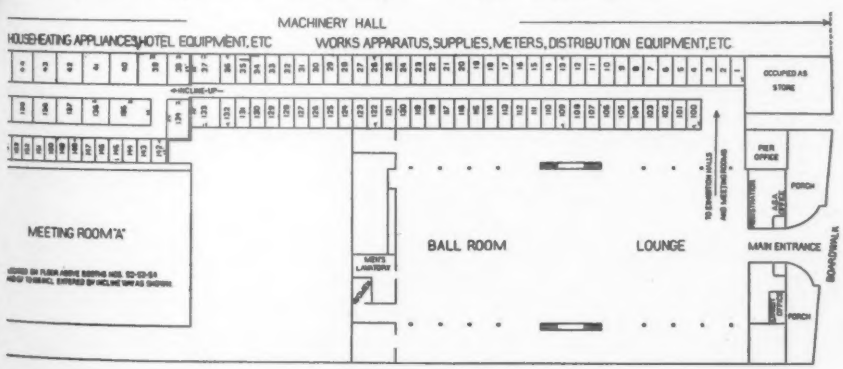
Johns-Manville, Inc., New York, N. Y.
The Titeflex Metal Hose Co., Newark, N. J.
Surface Combustion Co., New York, N. Y.
The Sands Manufacturing Co., Cleveland, O.
The Estate Stove Co., Hamilton, Ohio.
American Stove Company
- Geo. M. Clark & Co. Div., Chicago, Ill.
- Dangler Stove Co. Div., Cleveland, O.
- National Stove Co. Div., Lorain, O.
- New Process Stove Co. Div., Cleveland, O.
- Quick Meal Stove Co. Div., St. Louis, Mo.
- Reliable Stove Co. Div., Cleveland, O.

Peerless Heater Co., Pittsburgh, Pa.
Humphrey Co., Kalamazoo, Mich.
Home Incinerator Co., Milwaukee, Wis.
Mine Safety Appliances Co., Pittsburgh, Pa.
National Tube Co., Pittsburgh, Pa.
The Tappan Stove Co., Mansfield, O.
Chambers Manufacturing Co., Shelbyville, Ind.
James B. Clow & Sons, Chicago, Ill.
The Beckwith Co., Dowagiac, Mich.
The Wilcolator Co., Newark, N. J.
Gas Purifying Materials Co., Long Island City, N. Y.
Superior Meter Co., Brooklyn, N. Y.
American Gas Products Corp., New York, N. Y.
Lambert Meter Co., Inc., Brooklyn, N. Y.
Geo. D. Roper Corp., Rockford, Ill.
The U. G. I. Contracting Co., Philadelphia, Pa.
American Meter Company
- John J. Griffin & Co., Philadelphia, Pa.
- Helme & McIlhenny, Philadelphia, Pa.
- Maryland Meter Works, Baltimore, Md.
- D. McDonald & Co., Albany, N. Y.
- Metric Metal Works, Erie, Pa.
- Nathaniel Tufts Meter Works, Boston, Mass.

Pittsburg Water Heater Co., Pittsburgh, Pa.
Reznor Manufacturing Co., Mercer, Pa.
Abendroth Bros., Port Chester, N. Y.
Alpha-Lux Co., Inc., New York, N. Y.
The Cleveland Heater Co., Cleveland, O.
The Cleveland Gas Burner & Appliance Co., Cleveland, O.
Detroit-Michigan Stove Co., Detroit, Mich.
Tinnerman Stove & Range Co., Cleveland, O.
Safety Gas Main Stopper Co., Brooklyn, N. Y.
The Peninsular Stove Co., Detroit, Mich.
The Lattimer-Stevens Co., Columbus, O.
Mears-Kane-Ofeldt, Inc., Philadelphia, Pa.
Economy Governor Co., Anderson, Ind.
Cruse-Kemper Co., Ambler, Pa.
E. J. Lavino & Co., Philadelphia, Pa.
Minneapolis Heat Regulator Co., Minneapolis, Minn.
Andes Range & Furnace Corp., Geneva, N. Y.



The Porcelain Enamel & Manufacturing Co., Baltimore, Md.
The Hoffman Heater Co., Louisville, Ky.
Cutler-Hammer Mfg. Co., Milwaukee, Wis.
Time-O-Stat Corp., Milwaukee, Wis.
Chapman Valve & Manufacturing Co., Indian Orchard, Mass.
Steere Engineering Co., Detroit, Mich.
Glenwood Range Co., Taunton, Mass.
Mueller Brass Co., Port Huron, Mich.
Mueller Co., Decatur, Ill.
A-B Stove Co., Battle Creek, Mich.
Elliott-Fisher Co., New York, N. Y.
The Connersville Blower Co., Connersville, Ind.
American Cast Iron Pipe Co., Birmingham, Ala.
Cribben & Sexton Co., Chicago, Ill.
R. D. Wood & Co., Philadelphia, Pa.
Drake Non-Clinkering Furnace Block Co., New York, N. Y.
Wailes Dove-Hermiston Corp., New York, N. Y.
The Sprague Meter Co., Bridgeport, Conn.
Dearborn Chemical Co., Chicago, Ill.
Isbell-Porter Co., Newark, N. J.
Cleveland Gas Meter Co., Cleveland, Ohio.
The Stacey Brothers Gas Construction Co., Cincinnati, Ohio.
Strait & Richards, Inc., Newark, N. J.
Boone County Coal Corp., Sharples, W. Va.
Hays Manufacturing Co., Erie, Pa.
The Stacey Manufacturing Co., Cincinnati, Ohio.
Walker & Pratt Mfg. Co., Boston, Mass.
The Honeywell Heating Specialties Co., Wabash, Ind.
The Floyd-Wells Co., Royersford, Pa.
United States Cast Iron Pipe & Foundry Co., Burlington, N. J.
Giant Manufacturing Co., Council Bluffs, Iowa.
Milwaukee Gas Specialty Co., Milwaukee, Wis.
The Columbus Heating & Ventilating Co., Columbus, Ohio.
Pennsylvania Crusher Co., Philadelphia, Pa.
The Crandall Pettee Co., New York, N. Y.
The Kompak Co., New Brunswick, N. J.
The Roberts Brass Mfg. Co., Detroit, Mich.
Majestic Manufacturing Co., St. Louis, Mo.
National Refrigerating Co., New Haven, Conn.
The Koppers Co., Pittsburgh, Pa.
The Western Gas Construction Co., Fort Wayne, Ind.
J. B. Slattery & Bro., Inc., Brooklyn, N. Y.
Birmingham Stove & Range Co., Birmingham, Ala.
McWane Cast Iron Pipe Co., Birmingham, Ala.
Burroughs Adding Machine Co., Detroit, Mich.
Dun-Rite Clock Device Co., New York, N. Y.
The Parsons Company, Newton, Iowa.
The Bartlett Hayward Co., Baltimore, Md.
West Gas Improvement Co. of America, New York, N. Y.



Permissible Flue Areas

(Continued from page 328)

TABLE II

H	L	$H-\frac{\Delta P}{\delta_m}$
10′	25	9
20′	49	17.77
30′	69	27.0
40′	88	36.25
50′	103	45.50
60′	116	54.50
70′	126	64.50
80′	134	72.50
90′	138	81.50
100′	140	90.50

Now to completely co-ordinate the theoretical with the practical observations, we need only to select three points on one of the curves, say the one drawn for H = 20 feet, and solve the three equations simultaneously for the values as selected in order to obtain the three unknowns.

For the point (V = 5.05 ft. per sec., pipe dia. = 3 ins.).

$$f\,\frac{(5.05)^x}{64.4}\cdot\ 49\ \cdot\ \frac{1}{(.0625)^y}=17.77 \quad \text{Equation (a)}$$

For the point (V = 7.6 ft. per sec., pipe dia. = 6 ins.).

$$f\,\frac{(7.6)^x}{64.4}\cdot\ 49\ \cdot\ \frac{1}{(.125)^y}=17.77 \quad \text{Equation (b)}$$

For the point (V = 8.7 ft. per sec., pipe dia. = 8 ins.).

$$f\,\frac{(8.7)^x}{64.4}\cdot\ 49\ \cdot\ \frac{1}{(.167)^y}=17.77 \quad \text{Equation (c)}$$

Solving simultaneously,

$$f=.05;\quad x=1.95;\quad y=1.1$$

By substitution in either of the other two curves shown on sheet No. 1, the same values will be found.

Combining theory with values of f, x, and y shown above, a general equation for any stack height results:

$$.05\,\frac{V^{1.95}}{64.4}\,L=\left(\frac{A}{S}\right)^{1.1}\left(H-\frac{\Delta P}{\delta_m}\right)$$

EQUATION IV

or taking logarithms, the general equation for any stack height evolves itself to be:

$$\text{Log}_{10}\ V=\frac{\text{Log}_{10}\left(H-\frac{\Delta P}{\delta_m}\right)+1.1\ \text{Log}_{10}\left(\frac{A}{S}\right)}{1.95}$$

$$\frac{-\text{Log}_{10}\ \frac{L}{64.4}+1.301}{1.95}$$

EQUATION V

Now by using Table II and substituting its values in Equation IV or V, one may draw curves for any height of stack desired. Such a collection of curves is shown on curve sheet No. 2.

In order to make the figures universally applicable we must plot $\frac{A}{S}$ instead of pipe diameters. This takes care of rectangular vents. On the other axis we may plot Quantity of flue gas per second divided by area of vent in square feet instead of velocity, since one is equal to the other.

Now $\frac{\text{Quantity}}{\text{Area}}$ is proportional to cubic feet of gas fired per hour per square inch of vent area for any given gas. But this figure varies with locality so we may now plot maximum B.t.u. per hour per square inch of vent area since for all gases the air required for complete combustion and the resultant quantity of the flue gas is closely proportional to the calorific value of the gas burned. Such a general compilation is shown on curve sheet No. 3.

To make these curves even handier for ready reference the plot may be changed to $\frac{A}{S}$ versus total B.t.u. per hour. These curves comprise curve sheet No. 4 with an additional scale added beside $\frac{A}{S}$ which may be used to read diameters in the case of round vents.

A National Analysis of "Cooking in Volume"

Figures That Show the Size of the Field That Can and Should Use Gas

THIS national analysis of the institutional consumer market for food products calls attention to the fact that the "cooking in volume" field is a large one. There is a great deal of hotel, restaurant and institutional cooking, all of which should be done by gas.

The MONTHLY is indebted to Management Magazines, Inc., for permission to publish the analysis.

Operating and Economic Classification of the Institutional Market

	Hotel Market	Hospital Market	Club Market	Cafeteria Market	School Market	Restaurant Market	Total No. of Units
Number of Units	25,000	6,900	9,000	22,000	15,000	72,000	158,300

The Three Types of Mass Feeding Places That Comprise the Institution Market

A clear cut perspective can be had from this initial approach, which shows its scope and sub-divisions.

Cafeteria Service

No. of Units	Classes	Daily Average Each	Total Meals Served Daily
15,000	Public	1,500	22,500,000
4,200	Industrial	500	2,100,000
2,000	Hotel	1,500	3,000,000
800	Club	200	160,000
2,000	Hospital	600	1,200,000
13,500	School	400	5,400,000
1,100	YM's-YW's	300	330,000
38,600			34,690,000

Restaurant Service

No. of Units	Classes	Daily Av. Each	Total Meals Served Daily
24,000	Hotel	500	12,000,000
9,000	Club	200	1,800,000
4,800	Hospital	300	1,440,000
41,000	Public	500	23,000,000
800	Industrial	50	40,000
1,500	School	500	750,000
1,000	Dining Car	75	75,000
300	Steamships	600	180,000
82,400			39,285,000

Hospital Service

No. of Units	Classes	Meals Daily Av. Ea.	Total Meals Served Daily
6,900		600	4,000,000
6,900		600	4,000,000

	Meals	% of the Market
Total daily Food Consumption of the U. S.	345,000,000	100
Total daily Food Consumption of places that feed enmasse	77,975,000	23

Institutional Consumers Comprise More Than 1/5 of the Total Market.

The Average advertising appropriation for a food product producer is $1,000,000.00

Average appropriation required to reach the Institutional Market is 25,000.00

Industrial Gas Course At M. I. T. June 14-25

THE fifth annual industrial gas course under the auspices of the New England Gas Association is to be conducted at Massachusetts Institute of Technology, Cambridge, Massachusetts, June 14 to 25 inclusive. The schedule includes lectures on gas manufacture; heat and temperature; temperature measurements—Expansion, melting, boiling and specific heat; combustion; heat transfer; heat treatment; distribution and installation practice; burners and their application; combustion systems and temperature control; volume water heating; competitive fuel; application of gas to various industrial purposes; measuring and specifying equipment for house heating; installation and maintenance of house heating equipment.

These lectures will be given by such authorities as Professors G. B. Wilkes, Robert S. Williams, Winward Prescott, and Victor Homerberg of the Massachusetts Institute of Technology; Professor Jerome J. Morgan, of Columbia University; Warren D. Stewart, Engineer of Stone & Webster, Inc., Arthur C. Frey, Engineer of Manufacture, Worcester Gas Light Company; O. M. Olson, Engineer of Eclipse Fuel Engineering Company; M. B. Webber, Engineer of Athol Gas & Electric Company; W. E. Stark, Engineer of Bryant Heater & Manufacturing Company; Robert D. Stewart, Jr., Industrial Service Engineer, Blackstone Valley Gas & Electric Company; Henry Brewer of Leeds & Northrup Company, A. A. Pihlman of the Consolidated Gas Company of N. Y., and J. A. Doyle, vice-president of the U. S. Rockwell Company.

There will be laboratory work assigned to the students and opportunities to inspect gas plants and industrial gas installations in Boston and its vicinity.

A luncheon will be held on the final day of the course at the Riverbank Court Hotel, at which an address will be delivered by C. E. Paige, vice-president of the Brooklyn Union Gas Company. This luncheon will also be the annual meeting of the Industrial Gas Section of the New England Gas Association.

The tuition for the course is $50. A payment of $10 will entitle any visitor to attend a maximum of three lectures, except in the case of the house heating lecture, which will be open to all members of the Industrial Division attending the luncheon and annual meeting of that Division.

Accommodations will be provided at the Crafts Dormitory at $20 for the two weeks. There are excellent restaurants and lunch rooms in the vicinity. Living at the dormitory has in the past proved a very desirable arrangement as it gives the students an opportunity to meet each other and exchange ideas.

In the past this course has been very successful and is highly recommended to anyone wishing to further his knowledge of the application of gas to industrial uses.

The Committee in charge of the course, headed by J. J. Quinn, vice-president of the Citizens' Gas Company, Quincy, Mass., with the able co-operation of Professor G. B. Wilkes of the Massachusetts Institute of Technology, is lending every effort to make the course this year even better than previous years.

Further information can be secured by addressing James W. Howard, Secretary of the Industrial Educational Committee of the New England Gas Association, c/o Pawtucket Gas Company, Pawtucket, R. I.

Testing Gas Ranges

(Continued from page 345)

tests. Our experience has taught us that we must have substantial and durable construction as well. And further, the factor of convenience must also be given consideration. The remaining 25 per cent of our time is devoted to such determinations.

Our Laboratory efforts should do a great deal to increase the desirability of our service by raising the construction and performance standards of the various types of gas appliances sold throughout the country.

INDUSTRIAL GAS DATA

One of the most valuable services which a gas man can render to the industry is the gathering of industrial data for the progress committee. Blank sheets can be obtained from the A. G. A. which make the listing of the information a very easy matter. It is of great value in selling an industrial prospect to be able to point out that his competitors are doing it with gas, and that they are doing it with such great economy.

A Simple, Flexible and Practical Sales Program

Two Phases of the Blue Star Plan Are Now Actively Under Way

THE two phases of the Blue Star Campaign are now under way. Of necessity the preliminary work of preparing the promotional material has taken much time and study, but even during this period there have been real strides made in getting the plans into operation.

The first section of the program consists of co-operation with the Home Owners' Service Institute in the building and demonstration of thirty-six model homes in twenty-eight of the larger cities. During July these Blue Star Homes (equipped for adequate and convenient gas service) will be built in the following cities, and the gas companies are actively co-operating with the builders in the installation and exploitation of gas equipment:

New York, Baltimore, Atlanta, Chicago, St. Louis, and Salt Lake City.

In the months following, the Institute will continue rapidly to extend its program, and six Blue Star Homes each month are scheduled for the rest of the year. Just how completely these homes will be tied into the Blue Star Campaign will depend upon the efforts of the local gas companies.

THE SIGN OF A MODERN HOME
THIS HOME EQUIPPED FOR
MODERN GAS SERVICE
THE BLUE STAR SIGN
Certifies That Ample Provision Has Been Made Herein for Modern Gas Service To Meet the Standards of Comfort and Convenience of the Blue Star Homes Established in this Community and Sponsored by the A. G. A. and
THE HOME GAS COMPANY
Greater Comfort and Convenience

The Blue Star Sign

In the smaller cities, rapid progress has been made. Eight eastern gas companies are already organizing Blue Star Campaigns in their territories. In some of these places the plumbers have been drawn into the local group and are working with the gas companies in an effort to increase both the number and quality of appliances in use in the homes of the towns. More and more attention is being given to adequate and safe piping and flues—and the question of insulating of houses is being agitated wherever there is opportunity for house heating sales.

J. W. West, Jr., of the A. G. A. Headquarters staff is actively in the field assisting gas companies to organize these campaigns. Up to the present his efforts have been confined more largely to eastern companies in order that the Headquarters staff might keep in close

touch with him and provide quickly the materials needed for various local situations. However, his activities will be extended shortly, and before this issue of the MONTHLY appears it is expected that he will have started similar campaigns in the middle west.

Among the promotional materials prepared for the use of the gas companies are: A plumber-dealer pamphlet, a consumer booklet, Blue Star posters for homes, and Blue Star labels for appliances. The first of these is to be given to the trade group in order to "sell" them the idea of co-operation in the campaign. It explains the purpose and aims of the Blue Star idea—the increased service and happiness (and safety) to home-owners who have quality gas appliances installed —and the practical value and profit to the plumber in promoting this idea.

The consumer booklet, which is intended for distribution at demonstration homes, through the mails, with monthly bills, or by other methods desired by the local companies, is a thorough (yet not lengthy) discussion of the comfort, convenience and economy of adequate gas equipment in the home from the householder's viewpoint. Each of the major phases of domestic utilization is covered; illustrations of typical appliances are included, and their use is described. The significance of the Blue Star label on appliances—the mark of quality and safety—and of the Blue Star Sign on a home, is set forth in detail.

The Blue Star Campaign plan is not being presented to the gas companies as something that must be accepted as a whole, but rather as a *simple, flexible* and *practical* sales program which can be modified to suit local conditions, and which has a number of features that will make it a real profit-payer for any company that adopts it.

Does This Sound a Warning?

A CAREFUL reading of a recent issue of a well-known merchandising magazine in the electrical industry disclosed the interesting fact that the issue contained 13 full page advertisements concerning various electrical refrigerators. Eleven of these pages contained copy on various machines, while two of them concerned accessories.

The A. G. A. Regional Sales Conference

SINCE the last issue of the Monthly, the plans for the two Summer Sales Conferences have gone ahead rapidly. The New York Regional Council, under the leadership of G. M. Karshner, assistant general commercial manager, Consolidated Gas Company of New York, has shaped up a most interesting and valuable program of speakers and round-table discussions.

Some of the addresses at this meeting, which will be held at Lake Mohonk, New York, June 3, 4 and 5, will be given by Colonel Oscar H. Fogg, Clifford E. Paige, T. R. Beal, Alexander Forward, A. Gordon King, J. R. Jennings, Maye Lovell, W. E. Derwent and H. Leigh Whitelaw.

The registration at this meeting bids fair to exceed last year's and those attending will remain for the full period of the Conference which has been shortened one day from last year's schedule.

The New England meeting, to be held as before at the Hotel Thorwald, Gloucester, Mass., will take place on June 11 and 12, with three business sessions. The Sales Division of the New England Gas Association, which is sponsoring this meeting, has prepared a program which will rival the other Sales Conferences. In addition to some of the speakers who will also be at Mohonk, the Gloucester meeting will be addressed by H. N. McConnel, R. C. Hoffman, Jr., Gladys Peckham, F. G. Sherrill, and Howard Coonley.

Several members who attended but one of these meetings last year are planning to attend both Conferences this year because of the stimulus and aid received from hearing problems discussed from different viewpoints.

HOME SERVICE LUNCHEON

TO further the effort being made to have all home service directors attend the annual convention of the A. G. A., plans have been made to have a luncheon and round table discussion at the Hotel Shelbourne, Wednesday, Oct. 13, the day home service is presented in the Commercial Section Program. This luncheon will be open to all directors and their assistants.

Those planning the program have asked that all reservations be made through Miss A. Deane Dowell, home service counsellor, A. G. A. Headquarters.

Distribution Conference Held in Cleveland

(Continued from page 357)

outlined by J. T. White, Brooklyn, N. Y., in the summary on "Appliance Installation and Piping." Of those answering the question on the use of vent pipes six encourage them, four insist upon vent pipes, and at least two operate under local laws requiring the venting of water heaters.

J. K. Crowell, Yonkers, N. Y., used a chart to illustrate the outstanding features desirable in house governors in his summary on this subject. The most important points to be considered are accessibility of parts, positive shut-off and vent to outside of the building.

The discussion showed that about half of the companies represented at the meeting were using house governors. At Aurora, Ill., they have 30,000 regulators subject to pressures up to 110 pounds with the average at 60 pounds. In all cases their regulators are vented and they are sealed at ten inches. The Westchester Lighting Company with about 5,000 house governors seal at 16″; Jackson, Mich., use a mercury seal above 16 pounds initial pressure and a dry seal for gas pressures under 15 pounds per square inch. Individual house governors are used by most companies in the case of house heating installations, even on low pressure gas.

"Distribution Wrinkles" was the name of an interesting summary prepared by J. H. Waldron, Brooklyn, N. Y. A stream of CO_2 gas is used in the mains during welding operations to prevent hazard by the Public Service Electric & Gas Company. In Indianapolis they are braizing broken pieces of cast iron to make full lengths. At Detroit they have been successful in cleaning mains of black rust by using a propelling nozzle, instead of dragging chain through the pipe. They find it necessary to cut the main only every 200′ instead of 60′ as formerly. The cost of cleaning has been greatly reduced. Chicago is meeting with success in cleaning services by means of suction pump.

E. S. Umstead, Providence, R. I., used an excellent group of charts to illustrate his talk on "Meter Shop Practice." In charts headed "Progress of Meters Through Repair Shops," the meters were divided into Class "A"—clean and adjust, Class "B"—oilers, and Class "C"—new diaphragms. Twenty-six operations were listed for Class "A," 29 for Class "B" and 33 for Class "C." A comparison of operations for 17 companies showed an average number of five operations for correct meters, 16 for Class "A" meters, 16 for Class "B" and 19 for Class "C." The various operations were given in detail.

The age of diaphragms in service before examination was charted as follows: One company reported three years; one reported four years; seven reported five years; four reported six years; six reported seven years; one reported eight years and three reported ten years. Most companies found diaphragm conditions O. K. on periodic tests.

Most companies felt that the amount of gas a meter should pass before being given test should be governed largely by local conditions and that there was little relation between amount of gas passed and the life of the diaphragm.

The majority of companies reported as not being in favor of making permanent repairs to meter leaks on customers' lines except under a few rare circumstances.

In the discussion it was shown that in the larger companies meter repair operations are carried out by different men

while in the case of the smaller companies one man usually carries out the entire operation.

In a short talk by K. H. Logan, Bureau of Standards, the work being carried out by the bureau on soil corrosion was outlined.

M. I. Mix, Chicago, presented the summary on "Main and Service Deposits—Effect of Dehydration" for W. D. Stewart. Out of 26 companies that reported, 17 have considerable deposit trouble while nine reported practically no trouble. Most of the latter, however, were natural gas companies. Attention was called to other losses such as slow meters, good will, etc., due to deposits. No general conclusion of types of deposits could be drawn from the reports received. Iron, sulphur and naphthalene, predominates in most of the deposits. Various methods of removing deposits were outlined. Mr. Mix gave in detail the suction method for the removal of deposits used so successfully in Chicago.

Prof. Demorest, during the discussion, called attention to the fact that most natural gas companies have little provision for the removal of drippage and this will have to be taken into consideration if they change to manufactured gas.

D. A. Powell told of an interesting situation in the American Light and Traction properties where they have been sending out gas under pressure (never under one pound for nine years without drips or grades and without experiencing trouble. Mr. Powell predicted that he believed in time all companies will be distributing dehydrated gas.

In the summary on "Welding-Mains and Services," by R. H. Whipple, Philadelphia, Pa., replies were received from 31 companies. Twelve reported no experience; five reported limited experience; 14 use welding and in this group eight weld service connections and four do not. Of the eight that do weld service connections five make the weld with gas on the line while three do so with the gas off. In the case of steel main seven companies favor screw joints for small sizes and six companies favor welding for all sizes; 14 favor the screw joint steel main under three inches. Mr. Whipple's experience has been that the welded joint for small sizes does not cost much more and it is very satisfactory.

During the discussion the welding experiences at Chester, Pa., were treated in detail. Here they use many special devices and means to accomplish satisfactorily the desired results. Mr. Umlmer, Linde Air Products Company, stated that pipe coatings will give no trouble in welding except when dealing with galvanized pipe. This can be overcome also.

The sub-committee reports on "Pipe Joints" and "Distribution Design," by H. B. Andersen, Philadelphia, Pa., and D. P. Hartson, Pittsburgh, Pa., were briefly presented as progress reports to form the basis of the final reports to be presented at the A. G. A. convention.

On Saturday morning, May 8th, through the courtesy of the East Ohio Gas Company, busses were available to transport the visiting distribution engineers so that they might visit the Appliance Testing Laboratory and inspect samples of pipe uncovered by the Bureau of Standards representatives in connection with their soil corrosion investigations.

The specimens uncovered by the Bureau of Standards representative included a wide diversity of materials such as Northern and Southern cast iron pipe, pure iron, wrought iron, de Laval cast iron, Bessemer steel, open hearth steel, copper-bearing steel, duriron fiber pipe, galvanized sheets of Bessemer, duriron and copper bearing steel, also lead coated pipe and 12 specimens of various copper contents and asphalt and pitch coated pipe. The specimens uncovered had been in the ground four years in what is known as "Alice loam" soil. After cleaning, testing, etc., the results of these first investigations will be made public. This will be probably in another six months.

The inspection tour of the Laboratory was under the guidance of R. M. Connor, Director.

Associations Affiliated with A. G. A.

Canadian Gas Association
Date of Affiliation—Mar. 25, 1919.
Pres.—J. J. Humphreys, Montreal Light, Heat & Power Co., Montreal, Que.
Sec.-Tr.—G. W. Allen, 7 Astley Avenue, Toronto.
Conv., Montreal, Que., July 8 and 9, 1926.

Empire State Gas and Electric Association
Date of Affiliation—Nov. 21, 1919.
Pres.—E. C. Scobell, Rochester Gas & Electric Corp., Rochester, N. Y.
Chairman Gas Section—J. E. Cooper, Utica Gas & Electric Co., Utica, N. Y.
Sec.—C. H. B. Chapin, Grand Central Terminal, New York, N. Y.
Commercial Section Conv., Watertown, N. Y., June 24, 25, 1926.

Illinois Gas Association
Date of Affiliation—Mar. 19, 1919.
Pres.—W. A. Bertke, Illinois Power & Light Corp., East St. Louis, Ill.
Sec.-Tr.—R. V. Prather, 305 Illinois Mine Workers Bldg., Springfield, Ill.
Conv., 1927.

Indiana Gas Association
Date of Affiliation—April 24, 1919.
Pres.—H. J. Roach, Northern Indiana Gas and Electric Co., Crawfordsville, Ind.
Sec.-Tr.—E. J. Burke, Room 1314, Peoples Gas Bldg., Chicago, Ill.
Conv., West Baden, Ind., June 3 & 4, 1926.

Michigan Gas Association
Date of Affiliation—Sept. 18, 1919.
Pres.—B. G. Campbell, Consumers Power Co., Pontiac, Mich.
Sec.-Tr.—A. G. Schroeder, Grand Rapids Gas Light Co., Grand Rapids, Mich.
Conv., Mackinac Island, Mich., June 24, 25, 26, 1926.

Mid West Association
Date of Affiliation—May 21, 1919.
Pres.—Frank S. Edge, Peoples Light & Fuel Co., Grinnell, Iowa.
Sec.-Tr.—H. R. Sterrett, 551 Seventh St., Des Moines, Ia.
Conv., St. Paul, Minn., April, 1927.

Missouri Association of Public Utilities
Date of Affiliation—June 18, 1920.
Pres.—F. S. Dewey, Kansas City, Mo.
Sec.-Tr.—F. D. Beardslee, 315 N. 12th St., St. Louis, Mo.
Conv., 1927.

New England Gas Association
Pres.—F. C. Freeman, Providence Gas Co., Providence, R. I.
Pres. Operating Div.—A. J. Smith, Concord Gas Co., Concord, N. H.
Sec.-Treas. Operating Div.—F. E. Drake, Lynn Gas & Electric Co., Lynn, Mass.
Pres. Sales Div.—M. B. Webber, Marlboro-Hudson Gas Co., Boston, Mass.
Sec.-Treas. Sales Div.—J. H. Sumner, 719 Massachusetts Ave., Cambridge, Mass.
Conv., 1927.

New Jersey Gas Association
Date of Affiliation—April 25, 1919.
Pres.—L. N. Yetter, Atlantic City Gas Co., Atlantic City, N. J.
Sec.-Tr.—Louis Stoeker, Public Service Electric & Gas Co., Newark, N. J.
Conv., 1927.

Oklahoma Utilities Association
Date of Affiliation—September 16, 1925.
Pres.—J. A. Frates, Oklahoma Union Railway Co., Tulsa, Okla.
Mgr.—E. T. McKay, Oklahoma City, Okla.
Conv., 1927.

Pacific Coast Gas Association
Date of Affiliation—Sept. 18, 1919.
Pres.—F. J. Schafer, Southern California Gas Co., Los Angeles, Calif.
Exec. Sec.—Clifford Johnstone, 447 Sutter St., San Francisco, Calif.
Conv., Pasadena, Calif., Aug. 23 to 27, 1926.

Pennsylvania Gas Association
Date of Affiliation—April 10, 1919.
Pres.—Allyn C. Taylor, Consumers Gas Co., Reading, Pa.
Sec.-Tr.—Geo. L. Cullen, Harrisburg Gas Co., Harrisburg, Pa.
Conv., 1927.

Southern Gas Association
Date of Affiliation—May 20, 1919.
Pres.—A. E. Merchant, New Orleans Public Service, Inc., New Orleans, La.
Sec.-Tr.—J. P. Connolly, 141 Meeting St., Charleston, S. C.
Conv., Atlanta, Ga., April 20, 21, & 22, 1927.

Southwestern Public Service Association
Date of Affiliation—September 26, 1923.
Pres.—H. E. Borton, Mineral Springs Electric Co., Dallas, Texas.
Chairman Gas Section—C. K. Fletcher, Fort Worth Gas Co., Fort Worth, Texas.
Sec.—E. N. Willis, 403 Slaughter Bldg., Dallas, Texas.
Conv., 1927.

Wisconsin Utilities Association
Date of Affiliation—March 25, 1919.
Pres.—John St. John, Madison Gas & Electric Co., Madison, Wisc.
Exec.-Sec.—J. N. Cadby, 445 Washington Bldg., Madison, Wis.
Conv., 1927.

Geographic Divisions

Eastern States Gas Conference
Date of Formation—April 11, 1923.
Pres.—S. P. Curtis, American Gas Co., Philadelphia, Pa.
Sec.-Tr.—J. C. Smith, Consumers Gas Co., Reading, Pa.
Conv., Bellevue-Stratford Hotel, Philadelphia, Pa., April 27 & 28, 1927.

Employment Bureau

SERVICES REQUIRED

LARGE COMPANY operating in Middle West desires to employ two Industrial Gas Engineers for Industrial Gas Sales and Survey Work. Will be employed on straight salary. State age, salary expected and past experience. Address A. G. A. Key No. 071.

ENGINEER—Large operating company desires the services of an engineer with experience in the application of gas and the selling of industrial gas appliances. State age, past experience and salary expected. Address A. G. A. Key No. 072.

WANTED by large gas company in middle west, salesman for industrial gas appliances. Address A. G. A. Key No. 073.

LARGE Middle Western Gas Company desires to employ an industrial gas engineer to work in industrial gas sales department. One with sales experience on large high pressure installations preferred. State age, salary expected and past experience. Address A. G. A. Key No. 075.

WANTED—Meter repair man of good habits and some mechanical ability to do the work in a meter shop for a company having 6,000 meters. A good job—good pay—full time and good environment. A fine chance for a young man wishing to locate permanently. Address A. G. A. Key No. 077.

RATE EXPERT—Large holding company requires the services of a man thoroughly experienced in gas and electric rates. Address A. G. A. Key No. 078.

WANTED—A fast growing Gas Syndicate operating a number of Gas Companies desires the services of an experienced gas appliance solicitor. Only trained and experienced men with good references need apply. A good opportunity for a live, wide-awake salesman. Address A. G. A. Key No. 079.

SALESMEN—Large Public Utility Company operating in Central New York and many other states, desires to employ several securities salesmen to sell company securities. Excellent opportunity. State salary, age, experience, married or single. Address A. G. A. Key No. 080.

SALESMAN—Young man to sell equipment to Gas Companies and other industries. Practical experience in gas distribution more important than actual selling experience. Salaried position with well established company. Address A. G. A. Key No. 081.

SALESMEN-WATER HEATERS—Eastern Gas Company requires services of several Water Heater salesmen for campaign on Automatic Storage water heaters. Heaters will be sold on Thirty-Day Trial—no money down—one year to pay. Commissions far beyond the average will be paid. Give full particulars in first letter and how soon you will be available. Address A. G. A. Key No. 083.

GAS ENGINEER, technically educated in fundamentals of chemistry and mechanical engineering, with some knowledge of civil and electrical engineering and familiarity with business economics, having three to ten years, preferably in design and construction of coal and water gas plants and high and low pressure distribution system. Capable of handling operating and construction problems for system of several gas properties. Permanent position. Location, New York State. In replying, please give full details of education, experience, salary desired, availability and small photograph. Address A. G. A. Key No. 084.

INDUSTRIAL GAS SALES REPRESENTATIVE: Gas company in a Middle Atlantic State has an opening for a technical college graduate, with fundamental knowledge of application and combustion of various fuels, to sell gas for industrial uses. Must be capable of making plant surveys of heat applications. State age, education, experience and salary desired. Address A. G. A. Key No. 085.

SALESMEN: Medium-sized Public Utility Operating Company located near New York City has opening for one gas appliance salesman, and two securities salesmen to sell gas company securities direct to consumers. State salary, age, experience, and married or single. Address A. G. A. Key No. 086.

A COMPANY operating a number of gas and electric properties in the East desires to secure the services of several ladies for their Home Service Department. Applicants should have had experience in the gas and electric departments of a Public Utility in the following lines of work, gas and electric cooking, minor maintenance and adjustments of gas and electric appliances as well as being able to meet the public. The position will require some traveling and will pay a good salary with expenses, and offers an opportunity for advancement in a prominent and progressive organization. State age, experience, salary expected and enclose photo in first letter. Address A. G. A. Key No. 087.

INDUSTRIAL GAS SALESMAN—Must have sufficient engineering experience and ability to make estimates, recommendations and demonstrations: and also must have that quality of salesmanship which can bring about the signing of contracts. Company operates in a city of approximately 200,000 inhabitants. Address A. G. A. Key No. 088.

A NEW GAS APPLIANCE COMPANY desires to employ Gas Appliance Salesman who has had considerable experience in selling Water Heaters, boilers, etc. State age, salary expected, experience. Address A. G. A. Key No. 089.

SERVICES OFFERED

TECHNICAL MAN—(34) desires position as manager or superintendent of gas plant in city of 20,000 to 50,000 population; have had twelve years' experience in gas business of which last six have been as manager of gas properties; experience as superintendent of high and low pressure distribution; business and technical education; married; available immediately; references from present and former employers; prefer South. Address A. G. A. Key No. 202.

WANTED—Position as manager of relatively small gas company or as engineer of larger property. Coal or water gas. Young technically trained engineer (chemical and mechanical) with 10 years' unusually broad experience in all phases of industry, including manufacture, commercial and industrial, wishes to locate with property in need of men who can show the kind of results that mean increased net earnings. Address A. G. A. Key No. 204.

WANTED—Am open for position as appliance salesman with appliance manufacturer, experience covers over fifteen years in the sale of gas ranges, automatic water heater and heating appliances, or as manager of appliance sales department with a gas operating company, experience includes executive and technical training. Married. Al references. Address A. G. A. Key No. 205.

A COLLEGE GRADUATE, twenty-six years old, unmarried, three years' experience in operating plant with maximum daily send-out of 2600 M; fifteen months in charge of smaller plant and distribution, would like position with advancement. Address A. G. A. Key No. 206.

AN ENGINEER experienced in the development of large volume commercial and industrial gas business is open for position as Utility Manager or department head. Record and references on file with A. G. A. Address A. G. A. Key No. 207.

EXECUTIVE thoroughly experienced in coke oven and water gas manufacture, distribution of gas, sale of metallurgical and domestic coke, and engineer of wide experience with ability to deal with public officials and general public. Now open for engagement. Best of references. Forty-two years old and married. Address A. G. A. Key No. 209.

WANTED—Position as Gas Engineer or Superintendent of property serving 30,000 or more meters. Fifteen years' experience in high and low pressure distribution, coal and water gas production. Address A. G. A. Key No. 211.

SUPERINTENDENT AND ENGINEER (38) desires new location with progressive company. Twenty years' experience in all departments from plant to commercial office. Will consider special department work with large company. Interested in industrial and house heating. Services available upon reasonable notice. Address A. G. A. Key No. 213.

ASSISTANT ENGINEER—Technical graduate with five years' practical experience, three years in Gas Business. Single, twenty-seven years of age, desires opportunity in manufacturing end. Experience in Water Gas, Producer Gas and Coke Oven Gas. Address A. G. A. Key No. 214.

3D
ZX
XU

Advisory Council

J. M. Bennett ..... Philadelphia, Pa.
S. T. Bodine ..... Philadelphia, Pa.
C. N. Chubb ..... Davenport, Iowa
H. H. Clark ..... Chicago, Ill.
R. C. Congdon ..... Hempstead, N. Y.
R. C. Cornish ..... Philadelphia, Pa.
Wm. M. Crane ..... New York, N. Y.
J. E. Davies ..... Chicago, Ill.
H. C. Davidson ..... New York, N. Y.
S. E. DeFrese ..... Rome, Ga.
J. S. DeHart, Jr. ..... Newark, N. J.
Chas. H. Dickey ..... New York, N. Y.
L. R. Dutton ..... Jenkintown, Pa.
P. H. Gadsden ..... Philadelphia, Pa.
Wm. Gould ..... Boston, Mass.
W. Griffin Gribbel ..... Philadelphia, Pa.
Ewald Haase ..... Milwaukee, Wis.
J. P. Hanlan ..... Newark, N. J.
R. J. Hole ..... Greensboro, N. C.
J. W. Heins ..... Philadelphia, Pa.
A. A. Higgins ..... Providence, R. I.
J. J. Humphreys ..... Montreal, Can.
F. H. Knapp ..... Pittsburgh, Pa.
A. P. Lathrop ..... New York, N. Y.
H. O. Loebell ..... New York, N. Y.
T. N. McCarter ..... Newark, N. J.
Donald McDonald ..... New York, N. Y.
C. O. G. Miller ..... San Francisco, Calif.
C. E. Paige ..... Brooklyn, N. Y.
A. P. Post ..... Philadelphia, Pa.
Oed Preston ..... Washington, D. C.
C. J. Ramsburg ..... Pittsburgh, Pa.
W. A. Sauer ..... Chicago, Ill.
H. S. Schutt ..... Philadelphia, Pa.
W. L. Smith ..... Battle Creek, Mich.
F. C. Weber ..... New York, N. Y.
L. J. Willien ..... Chicago, Ill.

AMERICAN GAS ASSOCIATION, INC.

HEADQUARTERS: 342 MADISON AVE., NEW YORK, N. Y.

Officers and Directors

PRESIDENT	H. C. ABELL	New York, N. Y.
VICE-PRESIDENT	A. B. MACBETH	Los Angeles, Cal.
SECRETARY-MANAGER	ALEXANDER FORWARD	New York, N. Y.
TREASURER	H. M. BRUNDAGE	New York, N. Y.
ASS'T TREASURER	W. CULLEN MORRIS	New York, N. Y.
SECTIONAL VICE-PRES.	F. L. BLANCHARD	New York, N. Y.
SECTIONAL VICE-PRES.	R. J. CANNIFF	Poughkeepsie, N. Y.
SECTIONAL VICE-PRES.	F. F. CAULEY	Chicago, Ill.
SECTIONAL VICE-PRES.	DeWITT CLINTON	Worcester, Mass.
SECTIONAL VICE-PRES.	W. E. DERWENT	Rockford, Ill.
SECTIONAL VICE-PRES.	J. P. HAFTENKAMP	Rochester, N. Y.

D. D. BARNUM	Boston, Mass.
T. R. BEAL	Poughkeepsie, N. Y.
R. B. BROWN	Milwaukee, Wis.
HOWARD BRUCE	Baltimore, Md.
GEO. B. CORTELYOU	New York, N. Y.
M. B. DALY	Cleveland, O.
H. L. DOHERTY	New York, N. Y.
ARTHUR HEWITT	Toronto, Can.
ALFRED HURLBURT	Pittsburgh, Pa.
J. B. KLUMPP	Philadelphia, Pa.
R. M. LEACH	Tauton, Mass.
F. A. LEMKE	Kalamazoo, Mich.
H. C. MORRIS	Dallas, Texas
B. J. MULLANEY	Chicago, Ill.
CHARLES A. MUNROE	Chicago, Ill.
G. W. PARKER	St. Louis, Mo.
D. J. YOUNG	Tacoma, Wash.

Section Officers

ACCOUNTING—Chairman	DeWITT CLINTON	Worcester, Mass.
Vice-Chairman	A. L. TOSSELL	Chicago, Ill.
Secretary	H. W. HARTMAN	Ass'n Headqtrs.
PUBLICITY AND ADVERTISING		
Chairman	F. L. BLANCHARD	New York, N. Y.
Vice-Chairman	A. W. HAWKS, Jr.	Baltimore, Md.
Secretary	C. W. PERSON	Ass'n Headqtrs.
COMMERCIAL—Chairman	R. J. CANNIFF	Poughkeepsie, N. Y.
Vice-Chairman	J. J. BURNS	St. Louis, Mo.
Secretary	R. L. BURDICK	Ass'n Headqtrs.
INDUSTRIAL GAS—Chairman	F. F. CAULEY	Chicago, Ill.
Vice-Chairman	C. C. KRAUSSE	Baltimore, Md.
Secretary	C. W. BERGHORN	Ass'n Headqtrs.
MANUFACTURERS—Chairman	W. E. DERWENT	Rockford, Ill.
Vice-Chairman	W. S. STEINWEDELL	Cleveland, Ohio
Secretary	C. W. BERGHORN	Ass'n Headqtrs.
TECHNICAL—Chairman	J. P. HAFTENKAMP	Rochester, N. Y.
Vice-Chairman	W. C. BECKJORD	New York, N. Y.
Secretary	H. W. HARTMAN	Ass'n Headqtrs.

SECRETARY-MANAGER	ALEXANDER FORWARD	Ass'n Headqtrs.
ASS'T SECRETARY-MANAGER	H. W. HARTMAN	Ass'n Headqtrs.